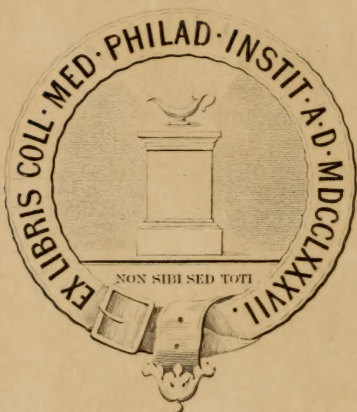




15430



15430



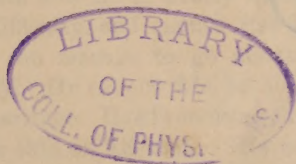
THE

CINCINNATI

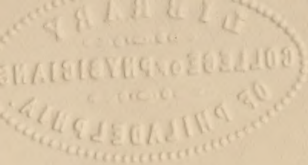
MEDICAL NEWS.

EDITED BY
J. A. THACKER, M. D.

NEW SERIES, VOL. II;—WHOLE SERIES, VOL. VI.—1873.



CINCINNATI, OHIO:
PUBLISHED BY THE
CINCINNATI MEDICAL NEWS COMPANY.



Digitized by the Internet Archive
in 2014

THE CINCINNATI MEDICAL NEWS.

VOL. II.

CINCINNATI, JANUARY, 1873.

No. 1.

CLINICAL EXPERIENCE IN PRIVATE PRACTICE.

Some every-day cases ; their history, diagnosis, remedial management, and the reasons therefore.

By Z. COLLINS McELROY, M. D., Zanesville, Ohio.

[Reported to the Muskingum County, Ohio, Medical Society at its session 1st of August, 1872, in the city of Zanesville, Ohio.

I. B. W., æt 65, weight 175 lb. Is seldom sick. Has large business cares, which he looks after personally. Leads a very active life; much of it out of doors. Walks a great deal in pleasant weather, as well as riding in the saddle, and rides in carriage or walks in bad weather. Has everything to live with, and makes generous use of his ample means. Is temperate; keeps good hours; and, in a word, is a model of propriety in every respect.

5th July, 1872, 9 o'clock A. M. About ten days since, Mr. B. W. commenced bathing night and morning, in water the temperature of the air, for the first time this season. Found it very pleasant and agreeable, as the weather has been very warm. He now thinks he remained in the water too long. Four or five days since, he began to feel stiff in his back, which has gradually increased until now he is nearly disabled. He gets down on a chair with difficulty, and cannot rise without assistance. Once upright, he can manage to go about the house, but with pain and difficulty. He cannot ride, because he can neither get in the saddle nor carriage. Has been using liniments, which have nearly blistered the skin on his back. His complexion is sallow; skin dry and harsh; temperature 100; pulse small in volume, with nearly natural frequency; has little appetite; and his disposition,

naturally genial, quite changed. Says his discharge from both bladder and bowels are natural in quality, quantity, and frequency. He thinks he is all right but his back.

I have attended this gentleman and his family for many years, and, though not often called to himself, I feel an increased responsibility when I am now, which I did not ten years since. He is certainly nearing the limit of active business life, though apparently he does not allow this fact to influence his business operations. His life is an exceedingly valuable one to his family as well as to the community in which he lives. Here he is this morning almost totally disabled from personal locomotion. He says, and thinks, he has caught cold in his back, or perhaps it is rheumatism. And his idea or mental conception of cold or rheumatism is that it is a something not natural to his body, which has got into it, and has stiffened his back; and I am sent for to get it out, and thus restore to him his accustomed power to move about.

In the professional management of his case, I must be governed by some sort of conceptions, whether they correctly or incorrectly represent the facts of his case or not to my mind. If my conceptions coincide with his, that he has the rheumatism, lumbago, or cold, my mental operations will be turned at once into empirical channels. My memory will be taxed to recall to mind the particular drugs or medicines which have been successful remedies in my own, as well as in the hands of others, in lumbago. And what a labyrinth it is that memory and a reference to text-books will call up! The first on the list is the lancet; then calomel, with other purgatives; opium; vapor and hot-air baths; antimony; colchicum; guaiacum; sulphur; nitre; lemon juice; alkalies, and their salts; veratria; cups; leeches; blisters, big and little; mustard poultices; perchloride of iron; cubebs; copaiba; cold douches, and cold or warm packs; liniments of turpentine, camphor, opium, capsicum, chloroform; strapping the back with adhesive plasters, etc. etc. Then the pathology of the standard text-books is quite as complicated as their therapy.

From this miscellaneous assortment of conceptions and results of empirical experiences with drugs and medicines, I have the privilege of selecting for my government in prescribing for my present patient; and not much matter which or what I select, I will be much in the situation of the sportsman with a shot-gun,

seventy shots, in the gun—sixty-nine to miss and one to hit and do the work. The game has a very slender chance to escape under these circumstances, truly; seventy chances to be hit—but how many to miss?

That is what I understand to be empiricism, pure and simple. And, if I had nothing else in the way of conceptions to guide me, empiricism would still be better than to do nothing at all. My patient is suffering, and in preference to abandoning him to his fate, as an otherwise motherly hen in my yard did a disabled chick yesterday, better try one after another of empirical remedies. It will at least appear merciful, kind, and humane; and may, perchance, succeed in relieving him, or he may get well simultaneously with the use of some remedy, and the remedy get the credit for the cure; though the facts, possibly, are, may be, or were, that the patient recovered despite the effects of the mistaken application of remedies.

But I either had, or thought I had, and based my action on conceptions which correctly represented to my mind what was transpiring, and what had actually transpired, in the body of my patient, which had led to his present disability. What were they? and how did I arrive at them?

My patient, like myself, was a human being. Born of a woman, and destined sooner or later to die. His body, as my own, was composed of materials common to earth, and, to my understanding, controlled in all respects by the earth's forces. That his body only differed from the material composing it is seen elsewhere in nature, in forms of molecular structure, just as glass only differs from the sand, lime and soda, which ordinarily compose it. That these forms of structure did duty in his body, just as all other forms of structure, in or out of his body, animate or inanimate, at the expense of their substance. That his forms of structure, or substance, differed only from the forms of structure, for example, of my watch, or the pen I write with, or desk I write on, or any other inanimate thing, in the fact, that they, in the acts of functional decay, and the performance of function or duty, store up the force—that is, provide for their own reproduction from new material. That the material in which this force for the reproduction of his momentarily wasting structures, or body, was stored up in what is known as the lymph. That the lymph in the animal world corresponded

to the seed in the vegetable, and was where the force heretofore supposed to be vital, and different from the earth's forces, was stored up. That observation, experience, direct and indirect experiment, alike concur in establishing the fact, that the main purpose of all life, animal or vegetable, is its own conservation, *i. e.* its own perpetuation and multiplication. That in no other way, and by no other means known as yet, can life be perpetuated, except by force stored up in sufficient material for that purpose, by a previously existing being or thing. That I could neither create nor annihilate matter; and was equally powerless in combining matter into forms of organic structure, capable of performing a function, or providing for their own reproduction and perpetuation from new material. And I was equally powerless in reference to force, in that I could neither create nor annihilate it.

Then, what is my power, and my duty as a physician in this present case, or any other case, seeing that I can neither create nor annihilate either matter or force; and that my sole power over forms of structure, directly, is the annihilation, either in the body of my present patient or my own, or that of any other living being or thing?

Experience, experiment, and observation, from the remotest antiquity, down to the moment this is written, absolutely demonstrate that the sole power of physicians is now and always has been in the past, simply over chemical or physical motion in materials, ascending to, or descending from, their condition in living structures. I can, by modes of force stored up in what are known as drugs and medicines, or remedial agencies, or measures, advance, retard or modify these physical motions of complex molecules of living matter; and neither I, nor any other physician, or any other living being, or thing, can do anything more, anything less, or anything different, to a human, or any other organized body, well or sick, dead or alive, by any means or modes or force whatever, past, present, or future, until the world, and the universe of which it is a part, comes under the dominion of different laws from those now in force for their government.

With these conceptions of the facts which it is important for me to know concerning the material and forces of his body, and with which I, as physician, will have to deal when I prescribe

for him, not unnaturally the first question meeting me in making my examination would be, "Has he a disease?" using the term as it is nearly universally understood by both professors and people. Though "disease" is the basis of medical literature, and the central idea of pathology, none of the professors of medicine have defined the term in the past, and they are more chary of a definition now, though most medical writers speak of its "specificity," and of the several "entities" of "disease." And the people, almost without exception, believe in the *bona fide* existence of "disease," as a something separate from, and foreign to, the body, which has gained its access to its interior, and is there running about and rioting among its structures and functions, and causing "disease." At one time it is "worms." At another "cold." At still others it is "malaria." And yet again, it is certain visible or invisible subtle "poisons." The people and the professions "catching" this or that "disease," locating time, place, circumstance, etc., at, or under which they "caught" their particular departures from health.

With the truth of things in my mind when I commenced the investigation of my patient's condition, I threw all conceptions connected with the term "disease," as commonly understood, aside.

What, then, was my mental work in arriving at a diagnosis and prescribing for this patient?

As follows: I surveyed the whole man from the greatest general principle into which all the phenomena of organic life can be merged—for it must not be forgotten that it is the business, or function of science to merge, or pack away, particulars into generals; that is, to merge detached and apparently not related particular facts into general principles, or facts; and the widest general principle of physiology into which all known facts of function, whether physiological or pathological, is, that "function is the expression or language of structure from which it proceeds." Whether we recognize it or not in our actual clinical mental work, this synthesis is the basis from which all analytical conclusions are drawn from physical and rational symptoms. Natural or physiological function is always associated in the medical mind with natural or physiological structure, and *vice versa*, pathological phenomena is in some, not definitely understood way, but with conditions designated as

“affected;” or irritated, inflamed, or congested, or hypertrophied, atrophied or degenerated, *i. e.* one morphological structure replaced by another, as muscle by fat, febrin, colloid, cancer, etc. “Function, the expression of structure, or language of structure,” is the magnetic needle in the compass of the medical practitioner always and unerringly pointing to the condition of molecular forms, or physical motion in the materials of structure, behind it.

In the interpretation of symptomatology, another general principle must always be borne in mind, viz., that the main purpose of all life is its own preservation. Morbid phenomena viewed simply as the work of an enemy, or processes altogether at variance with life, will not unfrequently lead to conclusions quite erroneous, and may lead to mistaken and unnecessary practice. For example, take the phenomena designated as bowel complaint, or vomiting, or sometimes hemorrhages; the most extended clinical experience has demonstrated that forbearance, and sometimes furtherance, and not restraint, at the hands of the practitioner, is followed by the best results.

So, again, in what are called fevers—continued and eruptive—experience has shown that forbearance with morbid processes is the practitioner’s first duty, *i. e.* he must “expect” a good deal, and do but little, except to supply material—food and other conditions of life; for the morbid processes, or phenomena, are working out salutary results.

Another great general fact or principle demonstrated by actual experiment and observation is, that the mean of all the physical or chemical motions in the material of the living human body in health, at all points of the earth’s surface is 98 4-100 degrees Fahrenheit thermometer scale, in the axilla. This with another closely allied to it, viz., that “for every dynamic result in a living body, there must be corresponding changes, or motion in matter,” and I am ready to investigate my patients case intelligently.

With the light they gave me, I found little difficulty in unravelling the mysteries of my patient’s condition satisfactorily to my own mind. Thus, he complains mostly of his stiff back, and his inability to stoop down, sit down, or rise up after he is on a chair, or in bed, without pain. His temperature of 100 degrees, discloses the fact that physical motion in the interest of waste is

two degrees of the thermometer scale above natural velocity; and further, that the apparently local difficulty is in reality general, or constitutional. Is the trouble—that is want of power, or elasticity in his back—confined to either structure, or motion in structure? “Function, the expression of structure,” therefore structure has been interfered with. And the temperature discloses the increased velocity or motion in structure; and motion in structure out of natural channels, or modes. He is able to walk when erect, showing that there is, so to speak, a clinic spasm, or certain degree of contraction of the structures of his back; and that it is not under voluntary control. Erect, he is comparatively free from pain; in all other positions, in more or less pain. To what is this condition of structure, and motion in structure due? To cold? And how would that bring about this condition of his structures? He has been bathing his whole person night and morning in water, conveyed in water-works pipe under ground, more than a mile from a reservoir to his residence, and was, therefore, in temperature, somewhat lower than the atmosphere. He found it very pleasant, and was in no hurry to get through with his baths. The water lowered the temperature of his body too rapidly, and, as a result, the rate or velocity of chemical motion in the repair of his momentarily wasting structures was changed, resulting further in modifying their molecular structure, as evidenced by modified function. Nor was the modification confined to the parts in which there was so conspicuous a change in function, as evidenced by the elevation of the temperature of the whole body. Physical motion in material in the interest of repair, was, with equal certainty, retarded, as well as modified; as evidenced by his diminished appetite. As he has been sick several days, with no extra evacuations from bladder or bowels, it is tolerably certain there is too much effete matter in his body. That is my diagnosis, and I think it correctly represents to my mind the actual condition of molecular work in the material, and the real state of physical motion in the matter of the body of my patient, which occasions my being called to him.

My duty, as a physician, to him, with this understanding of the nature of his disability, is to retard the rate of the total physical motion in the material of his body towards physiological rates, and into physiological channels; provide for the

elimination of effete matter, and supply material and conditions for repair.

Therefore, to carry into effect these indications, by hypodermic syringe, 18 minims of a solution of sulphate of morphia, 1 grain to 1 ounce of water, to be inserted in the back, at the point of most inconvenience to him, occasioned by attempts at stooping or rising. At same time he is to have a pint of water, boiling at the start, made tasty with common salt, and cooled in a tablespoon by blowing on it, and swallowed as hot as possible.

My conceptions of the *modus operandi* of these remedial expedients were, that the opium would promptly retard all motions in the material of his body to a uniform rate, which would be more particularly noticeable in the structures of patient's back by bringing them more under voluntary control, and enable him to use them in sitting down and rising up without pain; but its effects would not be confined to them by any means, but extended all over his body. And opium in this way will furnish better conditions for repair, than is supplied by any other now known means. The very hot water would diminish his liability to sick stomach following the sudden check to motion produced, or brought about, by the hypodermic introduction of the solution of morphia. As it is my patient's purpose to attend to business to-day, this precautionary measure of free heat and water was all the more necessary to sustain physiological motion, and facilitate the elimination of effete matter by the kidneys, as the water, or its equivalent quantity would mostly escape these within three hours. In less than ten minutes after using the syringe he rose from his chair without assistance, and could sit down and rise up again without pain. He was requested to take a bowl of bread and milk, as hot as he could sip it, by eleven o'clock.

Half past five o'clock P. M. Patient has attended to business all day, with considerable comfort. Had no sick stomach or giddiness; had his bowl of hot milk as requested; had a good dinner, and feels ready for supper. His back still pains him some, but can sit down and rise up from chair without assistance or much inconvenience. As it was before supper, I used hypodermic syringe again, with 20 m. solution of morphia, and he had a pint of boiling milk, which he cooled in a tablespoon and drank to prevent sick stomach, or any other disagreeable incidents

succeeding the use of the hypodermic syringe. As his bowels have not moved for a couple of days, and will not be likely to do so while the necessity for the use of the hypodermic syringe continues, he is to take a wine-glass full solution saline sulphates

Magnesia	℥ iv
Potass	℥ i
Soda	℥ s
Iron	℥ iij
Elix vitriol	℥ iss
Boiling water, filtered	℥ xv

In a pint of hot water, before going to bed. (He had the saline solution in the house.)

6th July, 8 o'clock, A. M. Patient did not take saline solution last night; could not get hot water at bed time. Had a good night's sleep; could turn in bed without pain; has had breakfast, and feels so much better that any further use of the hypodermic syringe is not called for. No prescription this morning.

5 o'clock, P. M. Patient still better. Has hardly known he had a back to-day; eats well; and does not feel weary, as he did yesterday evening. Requested him to take saline solution to-night, as his bowels have not moved yet.

7th July, 1872, 3 P. M. Patient did not take saline solution until this forenoon. It acted promptly, without any unpleasant results. His salutation was "Glad to see you Doctor, but I have no need of your services to-day." Case dismissed. I see my patient almost every day, somewhere. He has not been sick since. Saw him in the saddle to-day, (29th.) Has had no return of either pain or stiffness in the back; he looks well, and is always extremely busy.

II. 8th July, 1872. Miss M. M. æt 16; nurse in Mr. P.'s family; good *em bon point* for a growing girl; is seldom sick; was apparently well this morning, but about ten o'clock was found in water closet nearly insensible, and very chilly. She was carried into the house and laid on a lounge, and a messenger sent for me to visit her; but I was not at home, and did not see her till nearly noon. She was in the deepest distress; pulse very rapid and thready, surface shrunken and cold; in pain all the time, but having paroxysms at short intervals of great severity. Temperature 103; and is cross-eyed. The family were much

alarmed at her condition. They had given to her portions of brandy and paragoric, and had placed mustard plaster over the front of her person, which were still in place. While my examination was progressing, she passed into a paroxysm of severe pain such as she had had repeatedly before.

Here was a display of organic pyrotechnics, so to speak; a very interesting study to the pathologist, but a very great source of terror and alarm to all others. In the necessary rapid analysis of the phenomena, there was but one feature which bothered me in the least—though her eyes were symmetrical in health they were not so now. All else was simply a meaningless and purposeless display of mechanical force in very great excess. Two hours since it had a purpose, but it is likely most of the offending matter in her bowels has been expelled. My duty was to retard it towards safer velocities. She had given to her as soon as she could swallow, 1-3d gr. morphine, with half a teaspoonful chloroform. She soon became easy, but as she did not get quite free from pain, in ten minutes, another half teaspoonful of chloroform was given. In less than half an hour she was in apparently tranquil sleep, and slept most of the afternoon, waking up and asking for cold water. She was seen twice in the afternoon, but nothing more done for her. In the evening the temperature had declined to 100 degrees. She had no further motion from bowels, and had not passed any urine. Her mother was there to take her home. I said to Mrs. P. that M. would not be sick long; would very probably be ready for duty in the morning; and that she need not go home under the impression that she would be sick several days. But she did go home. Mrs. P. called next forenoon to see M. at her mother's, found her up, assisting her mother about the house; a little weak and pale, but anxious to return to her duties. But her mother was not willing for her to do so for the present. She took no other medicine, and returned to her duties with Mrs. P. in three days, and has not been sick since. Seen to-day (29th.)

III. 9th July, 1872, 9 o'clock, P. M. Mr. K. called for me to visit his daughter, 2 years old, who had had diarrhea for several days past, but did not lose her appetite, nor cease her customary play until this evening. The mother stated to me, however, that the child had been very peevish and fretful all day. Had

vomited everything she had swallowed during the day. Discharges from bowels very frequent, thin, and watery; occasionally greenish; sometimes whitish, or yellow, with streaks of blood at times, and smelling very strong. She was dozing in her mother's lap, while she was gently unloosing her clothing, so that I could place the thermometer under her arm; the child roused up, was much affronted at the proceedings, and vomited. Temperature 101.

This condition will be recognized as a case of so called cholera infantum. But in my mind it was viewed, not as a case of summer complaint, but as a departure from the normal rates of motion in the material of the child's body, both in the interests of repair and waste. Repair was certainly averted, while waste was proceeding at a not as yet dangerous pace above natural velocity. The child's body was certainly loaded down with effete, or dead matter, and the vomiting and frequent discharges from the bowels were efforts of nature to evacuate or expel it. My duty, as a physician, was not to arrest either, as they were salutary processes, but to guide both, and endeavor to obtain conditions for repair, and have material for repair supplied. To facilitate the disintegration of tissue which did not, and most likely could not, by its functional decay, involve normal phenomena, and the exit of effete matter, the child is to have a granule containing one grain of calomel every hour till vomiting ceases, and discharges from bowels change in physical character.

10th July, 8 o'clock, A. M. Baby has taken eight granules; twelve are missing from box, but parents are confident four were lost. They were given in teaspoonful cold water. Baby is much better, has not vomited for several hours, nor have bowels moved so frequently, and all traces of blood have disappeared. She has taken some milk this morning but prefers water or ice.

She is to have three more granules at intervals of two hours between each, and soon after the third one, a desertspoonful castor oil. She may have all the milk she will take, as well as water and ice.

5½ o'clock, P. M. Oil has operated, and baby much improved. Is very pleasant and playful, but looks cut down in flesh a good deal. She is to have a teaspoonful elix. pepsin, strychnin and bismuth, three times a day, and after each too frequent passage from bowels, in addition.

Saw baby next afternoon. She had been steadily improving. Had vomited again not more than a half an hour before I saw her, but the vomiting was so evidently due to her having eaten food beyond her capacity to take care of it, that no change was made in remedial management. She has not required any other treatment since, though her bowels have been quite loose much of the time, her father informs me. But repair was fairly active all the time, so that no further treatment was deemed necessary.

In the diagnosis and remedial management of these cases, attention was confined to the single factor of organic life, over which, as a physician, I could exercise any control whatever, by any or all remedial agencies combined, whether properly or improperly administered. It seems to me that including either of the other factors—prime factors of organic life—and there are but three of them, viz. materials, molecular forms of structure, and physical motion, in, or by materials—is needlessly adding complexity to the physician's problems in actual practice.

THE BLOOD: ITS CONDITION IN PULMONARY TUBERCULOSIS.

By A. P. DUTCHER, M. D., of Cleveland, Ohio.

I. THE NATURE OF THE BLOOD.

The blood has been compared by some writers to a mighty river, endowed with life, impetuously rushing through every part of the body by a vast net-work of canals. In the course of three-hundred and sixty-five days, these canals carry not less than three thousand pounds weight of nutritive material to the various tissues of the body, and the same amount of waste material from them. The blood is also regarded as the great centre of chemical and vital action, as wonderful as they are indispensable, soliciting our attention no less by the many problems afforded to speculative ingenuity, than the important practical conclusions to which our ideas respecting them lead.

By some medical philosophers, the blood is regarded as the chief source of all disease; hence, in tracing out the cause of pulmonary consumption, they find in the blood, as they suppose, specific morbid agents, which produce all the local lesions of this most fatal malady. To what extent the blood is chargeable

with these injuries cannot, in the present state of our knowledge, be determined. The subject has not been investigated with that care and attention which its commanding importance demands. The most of our systematic works contain but little on this subject of any practical value. That there is a difference in the blood of health and in consumption can be demonstrated, especially after the disease has become well established; but to do this successfully we must first know what healthy blood is.

Living healthy blood, by which we mean that which is still circulating in the living vessels, may be seen to consist of a transparent, nearly colorless liquid, which has been called *liquor sanguinis*; in which are numerous red and white corpuscles. On the other hand, when the blood has been drawn from the living vessels, and allowed to remain at rest, a spontaneous coagulation takes place, separating it into *crassamentum* and *serum*. The crassamentum or clot is composed of fibrin and corpuscles; the serum, of albumen, dissolved animal matter, and various salts. Thus there are five principal constituents in the blood: corpuscles, fibrin, albumen, dissolved animal matter, and salts. We shall treat of them separately.

II. THE RED CORPUSCLES.

The red corpuscles are the portion of blood on which its vivifying and calorific properties depend. They are distinct structures, living cells, or celiform nuclei, and may be seen by the microscope, when magnified about four hundred diameters. In size, they vary from 2029th to the 2637th part of an inch. They are somewhat flattened, and have a distinct circular outline. They are said to readily distend themselves by endosmosis with thin fluid, and, on sudden pressure being applied, and sometimes from other causes, they assume a kind of notched form, conveying the idea that the central mass is broken up into a number of granules pressing irregularly outward the homogeneous envelope.

The chief chemical constituent of the red corpuscles is hæmatin; this, when analyzed again, is found to be composed mostly of iron. Liebig looks upon iron as the real agent by means of which oxygen is carried through the circulation and brought to act upon the various tissues of the body. He supposes that if iron, in its original state, be the proto-oxyde, it may become the per-oxyde by uniting with an additional atom of oxygen, or the

proto-carbonate by the addition of an atom of carbonic acid. The first change he maintains takes place in the lungs, to which the blood comes charged with carbonic acid; the carbonic acid is given up by the iron, and replaced by an equivalent of oxygen taken in from the air; while in the systemic capillaries the second change is accomplished. Here the oxygen being imparted to the tissues, and being replaced by carbonic acid, which is given up by them to be conveyed out of the system. Liebig also maintains that there is far more than sufficient iron in the whole mass of the blood to convey, in this manner, all the oxygen and carbonic acid which are interchanged between the pulmonary and systemic capillaries.

This is a very ingenious and beautiful theory to account for the use of the red corpuscles, but, like very many others, it cannot be received as a physiological fact. It needs demonstration. But how are we to arrive at a definite conclusion as to their use? A brief glance at a few facts in comparative physiology will solve the problem. The existence of the red corpuscles in the blood is confined almost exclusively to the vertebrated class; the corpuscles which we find in the blood of the invertebrated are mostly white, and are very similar to those we are presently to describe. Among the lower invertebrated, the red corpuscles are entirely wanting, and the same has been discovered to be the case with the embryos of some of the highest animals at a very early period of their existence.

From these facts, it may be inferred that the red corpuscles are not necessary to the organizable elements of the blood. This being the case, we must look to some other department of the organization for their use. No intelligent physiologist will deny that they undergo very important changes in the systemic capillaries, their color being changed from purple to red in the former, and from red to purple in the latter; the conclusion is obvious that they have, as their principal office, the introduction of oxygen into the blood that circulates through the systemic capillaries, and the removal of the carbonic acid set free there; serving, in fact, as the medium for bringing the tissues in relation with the air, the influence of which is necessary for the maintenance of their vital activity.

In pulmonary tuberculosis, the red corpuscles are commonly deficient. In a normal condition of the blood, the red corpuscles

constitute about 127 parts in 1000. In consumption, they have been known to fall as low as 60 in 1000 parts; this was in the last stage of the disease. In most instances, they will not fall much lower than 70 in 1000. The consequence of such a want of one of the most important constituents of the blood cannot fail to be attended with very injurious consequences to the whole system. All of the tissues of the body must suffer more or less from the want of oxygen, and the retention of noxious elements in the circulating medium, which are a positive hinderance to their health.

In pulmonary tuberculosis, we can seldom restore the red corpuscles to their normal standard. We may supply the materials for making them, but in addition to the blood malady we have a local complication: a fearful mutation in the lungs which is not directly amenable to treatment. The reciprocal healthy action between the lungs and blood is gone, and no effort of medical skill can entirely restore them to their former normal action. Any approximation to such a result may be looked upon as a favorable omen. Iron, quiniæ, strychniæ, and cod-liver oil all have an influence in that direction; they are invaluable remedies in this disorder, and should be administered *ad libitum*.

III. THE WHITE CORPUSCLES.

The white corpuscles are much larger than the red. Under the microscope, they appear to be round vesicles, containing a number of excessively minute particles imbedded in a gelatinous substance. Their general appearance is, however, by no means uniform; they vary much in size and form. The cause of this has been traced to their different degrees of development, for it has been definitely settled by the researches of modern physiologists, that the white corpuscles originate in the plasma of the blood, and that in the first stage of their existence they are granular, and are ultimately developed in perfect cell structures.

In these cell structures, when examined in their early condition, the cell wall can scarcely be distinguished from the large nucleus to which it is attached, unless the cell be distended with water, which will show the nucleus to be in a soft granular tuberculated state, disposed to break up readily into two or more fragments. In the latter stage, of those at least which do not go on to full development, we find the nucleus apparently dispersed into

numerous isolated particles, which give the cell a somewhat granular appearance, and these particles may be seen in molecular movements within the cell, and in some instances they are so marked as forcibly to remind one of the contractions and expansions of that very minute microscopic animalcule *ameba*, probably the smallest of all organic beings.

The white corpuscles are not very numerous in healthy blood; about one to three hundred of the red; and this may be readily accounted for if we admit what is claimed for them by Dr. Draper and some other physiologists, that they are the early stage of the red corpuscles. Others, on the contrary, deny this, and assert that they are the chief agents in the formation of fibrin, which they elaborate out of albumen, imparting to it its peculiar coagulating and so-called plastic properties. Dr. Carpenter is a strenuous advocate of the latter opinion, and has discussed it quite extensively in his *Human Physiology*, and several other papers published in the medical journals. In his *Human Physiology*, page 129, after alluding to some experiments of Drs. Addison and Williams, as well as some of his own, to prove the connection between the generation of the white corpuscles in the blood and the production of fibrin, he says:

“These facts, therefore, afford strong grounds for the belief that the production of fibrin in the blood is closely connected with the development of the white corpuscles; and when we consider them in connection with the facts previously urged, there scarcely appears to be a reasonable doubt that the elaboration of fibrin is a consequence of this form of cell life, and is, in fact, one of its express objects. The fact that in the invertebrated, the white corpuscle never undergoes that high state of development which consists in its conversion into the red, and that in inflammation we have the proportion of white corpuscles to the red augmented (in man) from about 1.50 to 1.10 without any consequent augmentation of the red corpuscles—sufficiently proves that there is some other termination of the existence of the white corpuscles than their development into red; and it seems probable that a considerable portion of them rupture or deliquesce, so as to yield up their fibrinous contents without undergoing that further change.”

We cannot see very much force in this reasoning of Dr. Carpenter, for the very same arguments have been employed by

others to prove that the red corpuscles are the principal agents in elaborating fibrin; we, therefore, reject the views advanced by Dr. Carpenter, and fully indorse those of Dr. Draper and others, that they are undeveloped red corpuscles.

In pulmonary tuberculosis, the white corpuscles are usually increased in numbers. This is owing to the circumstance, that they are not furnished with hæmatin as rapidly as in health, hence, while there is a deficiency of red corpuscles, there is an increase of white. When they exist in superabundance they are exceedingly burdensome to the organs of circulation, and add very materially to the patient's suffering. The reason for this is to be found in the adhesive properties of the white corpuscles. as, under certain circumstances, they cling to other parts with a tenacity which the red corpuscles have not. Thus, in blood in which there is an actual increase in the number of white corpuscles, it is extremely common for agglutinations to take place among them, as soon as the red corpuscles are diminished, and the muscular strength of the heart and blood-vessels is lessened; indeed in every vessel, in which the stream becomes slower, and the pressure weaker, an agglutination of the white corpuscles may take place.

This condition of the blood in consumption renders its circulation very difficult, and demands such remedies as will diminish their number. Iron, quinia, cod-liver oil, chlorate of potash, and strychnia are therapeutical agents of great value in this case.

IV. THE FIBRIN.

The fibrin is one of the most important parts of the blood, the most universally diffused of the animal system, the most necessary for the supply and growth of the tissues. It may be easily seen by submitting a clot to repeated ablutions in water, when the red corpuscles will be entirely separated, leaving nothing but the clear fibrin. In this condition it possesses the softness and elasticity which characterises the flesh of animals, and contains about the fourth of its weight of water. Under the microscope it exhibits fibres, cells and granules.

It has been universally believed among physiologists that the coagulation of the blood was principally owing to the solidification of the liquid fibrin. But it has been recently demonstrated by M. Bernard that blood entirely deprived of its fibrin will coagulate.

He whipped out all the fibrin from some blood, and found that when it was even impossible to get any more, the blood subsequently coagulated. While it is perfectly evident that the blood will coagulate without fibrin, it is equally well known that it will not often coagulate when fibrin is present even in excess.

Dr. Richardson has proved this very clearly in his essay on the causes of coagulation of the blood. On page 34 he says: "Morgagni had described the blood as quite fluid after death in only four cases; all these were cases in which death ensued from slow arrest of the respiration. Three American physicians, Drs. Peters Goldsmith, and Moses, have published a report of the appearance of the blood in twelve cases of death resulting from the excessive use of ardent spirits. In every case the blood was fluid and dark, was of a cherry-juice appearance, and showed no tendency to coagulate. In death from narcotic poisoning, from delirium tremens, typhoid fever, and yellow fever, the blood is generally described as thin and uncoagulable. Dr. John Davy found the blood fluid and uncoaguable on exposure in cases of drowning, hanging, suffocation from the fumes of charcoal, and effusion of blood into the pulmonary air cells.

In pulmonary tuberculosis the fibrin is commonly in excess; it exhibits little or no tendency to form a consistent clot. This can be accounted for only by the supposition that the fibrin in this disease has degenerated, and lost some of its vital properties. In consequence of this degeneration in the quality of the fibrin, it is considered by some physicians as the chief source of tubercular deposits in the various tissues of the body. But this opinion of the origin of tubercle is exceedingly hypothetical, for we find the same degeneration of fibrin in other diseases, particularly in rheumatism, typhoid fever, diabetes, and erysipelas. In all these diseases the fibrin undergoes a great change, and is quite unfit for supplying the tissues of the body with the appropriate materials for their growth and maintenance.

In pulmonary tuberculosis the fibrin in the blood can be very much reduced by the judicious use of nitre, iodide of potassium and soda, opium, aconite, the bitter tonics and cod-liver oil, and in some cases attended with intercurrent pneumonia and pleurisy. Calomel will reduce it in a remarkable degree, as well as all the other constituents of the blood, and should, therefore, be administered with the greatest caution in this malady. The proto-

iodide of mercury is a very valuable combination of therapeutical agents. As an alterative it has few equals, and, as a de-fibrinate, it has no equal. In all cases of phthisis attended with much inflammatory action in the pulmonary tissues, it is very useful, in doses of one-fourth of a grain, morning and evening. If there is any medical agent in the world that has the power to promote the absorption of fibrin or crude tubercle, it is the proto-iodide of mercury.

V. THE ALBUMEN.

This is the chief constituent of the *serum*. It is generally believed to be useful in affording the materials from which fibrin is elaborated. It is also further useful in giving to the serum a consistency favorable for its circulation; for suspending and preserving the corpuscles from injury, and blandly sheathing the acrimony of the saline constituents. It was for a long time supposed that there was little or no difference between albumen and fibrin, in their relations to the living organized tissues; but it has recently been clearly demonstrated that there is a very important difference. It is a well known fact that albumen has no tendency to coagulate excepting under the influence of agents purely chemical; and when thus coagulated it is entirely destitute of structure, being simply a homogeneous aggregation of particles; while, on the other hand, fibrin manifests a uniform tendency to pass into the form of solid tissue; and it seems restrained only from doing so by certain influences the nature of which we do not at present understand.

The conversion of albumen into fibrin may be said to be the first step in the process of nutrition, by which the materials supplied by the food are made to form part of the living tissue of the body; and it is one to which some writers have very appropriately applied the term *assimilation*. This process is very incomplete in pulmonary consumption, and constitutes one of its most distinguishing features. Faulty assimilation may be said to be the first step in all those local lesions which occur in this disease. In consumption this portion of the blood is increased. In healthy blood, albumen constitutes about 70 parts in a 1000; in this malady it is sometimes found as high as 100 parts in 1000, but, like fibrin, it is depraved in quality, and shrinks far below the normal standard of vitality. There is no special therapeutics for

this condition of the blood besides such as have already been named. The wine of beef and iron I have found of great value to my tubercular patients as blood food. Pepsine is also useful in this case.

VI. THE DISSOLVED ANIMAL MATTER IN THE BLOOD.

From a careful analysis of the blood made by Simon, it appears that one portion of the dissolved animal matter is composed of ordinary fat, while another contains phosphorous, and it seems allied to the fatty acid of nervous matter. They are evidently derived from the food, either directly or by the transformation of its farinaceous ingredients, and they are chiefly appropriated to the maintenance of the combusive process. In pulmonary tuberculosis, the dissolved animal matter is commonly found in excess. From some experiments of Simon we learn that the healthy standard of fat in blood to be about 2.346, while in the phthisis, it ranges as high as 4.231.

The *saline matter* of the blood amounts to between seven and eight parts in one thousand. More than half their total quantity is composed of the chloride of sodium and potassium, and the remainder is made up of the phosphate of lime, the phosphate of soda, and a fraction of the phosphate and oxyde of iron. The use of the saline matter is in part to supply the minerals required for the generation of tissues, and the production of the various secretions. As to the condition of these elements of the blood in phthisis, we have no positive knowledge, but we may infer that they are decreased, from the fact that its specific gravity is somewhat diminished, and its watery particles increased.

CONCLUSIONS.

1. There is a decrease of the red corpuscles, and a slight excess of the white.
 2. There is an increase of the fibrin, and a deficiency of its vitality.
 3. The albumen is in excess as to amount, but depraved in quality, and unfit for the elaboration of healthy fibrin.
 4. There is an increase of dissolved animal matter, and a diminution of saline matter.
 5. There is a reduction of its specific gravity, and an increase of its watery particles.
-

CYSTICERCUS CELLULOSÆ IN MAN.

Par le Dr. E. LAUCEREAUX, médecin des hopitaux. (A memoir read before the French Academy.) Translated from the *Archives Generales de Medicine* by THOMAS C. MINOR, M. D.

The cysticercus, known to Aristotle, who considered it an affection most common to the hog, was attributed, in the seventeenth century, to the presence of a vesicular worm, first by Hartmann of Königsberg, and shortly afterwards by Malpighi. Relatively rare in man, the cysticercus appears to have been observed for the first time by Wharton, who, under the title "*De glandulis sanis varias corporis partes occupantibus in Milite*," reported a not doubtful case, and one of real interest, which he had treated in a living individual. Tumors extremely numerous, mobile and indolent, situated in the adipose cellular tissue and muscles, constituted this disease; they were at first submitted to mercurial treatment, which had no effect, and they were afterwards extirpated by a surgeon.

Not only Wharton, but Bonet, who published this case in his *Sepulchretum*, knew not the identity of these pretended glands with the alterations which constitutes measles pork. It is necessary to consult Werner, 1786, in order to have an authenticated observation of cysticercus in man. At the autopsy of a soldier, aged 40 years, who was drowned, and whose body remained for the space of two weeks in frozen water, this observer found the muscles full of vesicular worms. The liver, the lungs, and brain were not examined. This soldier had been subject for many years to attacks of melancholy, and often complained of a feeling of lassitude and heaviness in the limbs. Mascagni, Losche, Himly, Flormann, Laennec, Dupuytren, and Greves, have found the *cysticercus cellulosæ* in the muscles and in the conjoined sub-cutaneous tissue. Rudolphi reports that in his time they were met with in autopsies, at Berlin, once in fifty times; they existed in a more or less considerable number; these cysticerci were met most often in the gluteal muscles, the psoas, illiæ, extensors of the thigh, and more rarely in the brain. Gerlach, Wymann, Raikem, Demarquay and Gervais, Stich, etc., have likewise met numerous cysticerci in the muscles. Rudolphi, Ferrall, Andral, Lendet, and some other authors have noticed the presence of the same cyst in the walls of the heart. Their

observations are analyzed with care, and published in Dr. Daraines' remarkable work.

The cysticercus cellulosæ has been found in other organs and especially in the brain. Griesinger, after having twice met cysticerci in the nervous centres, collected from fifty to sixty cases of the same sort, which he submitted to a profound critical analysis. The eye is sometimes also attacked by cysticerci, and since the discovery of the ophthalmoscope this parasite has been observed therein, during life, by Græfe and several other ophthalmologists. The lungs (Himly, Demarquay, and Gervais), the liver, kidneys, and lymphatic glands are more rarely affected with cysticerci than the other organs, so that, among men as among animals, this disease, contrary to the affection produced by ecchinococci, seems to localize itself by preference in the subcutaneous cellular tissue and in the muscles. There is reason to believe, I think, that a more attentive examination of the last named organs at autopsies would allow us to find more often this sort of alteration; and, in fact, in less than a year, I have met three times, in the pectoral muscles, small elongated tumors the size of a large grain of barley, which have appeared to me to be only the dried up cysts of cysticerci. The patient I had the honor of presenting to the Academy, and who is the subject of this communication, is one of the most beautiful examples of this disease which has ever been presented in the living individual.

* OBSERVATION I.—Celina H., aged 43 years, after having worked in a factory at Amiens, came to live in Paris, where for twelve years past she has earned her living by ragpicking. She has had two children, who are dead, and aborted once seven years since; up to the month of May last, she lived with her husband, whose health left her nothing to desire, and then she lost her sight. This woman suffers from no serious inconvenience; she declares she has never suffered from tape worm, but that more than two years ago she noticed small projections or tumors on the surface of her body. The 2nd of Oct., 1871, she came and asked for admission to the St. Antoine Hospital. She was complaining at the time of vomiting; the cause of this was easily recognized by her having a badly supported and painful hernia. This hernia was reduced and supported by a truss; the

* The presentation to the Academy of Medicine of the patient in question took place in the month of February, and this memoir was read at the seance of May 27th, 1872.

vomiting soon disappeared, and the patient came to ask for her discharge; but the existence of the numerous tumors that she had upon her body led us to retain her in the hospital for a few days longer. These tumors, which occupied the trunk, neck, and limbs, were situated as much in the sub-cutaneous cellular tissue as in the muscles; their number was considerable, and their character especially alike; from the size of a hazelnut to an olive stone. These tumors were not entirely spherical, but ellipsoid, with the greater parallel diameter in the direction of the muscular fibres, or of the vascular trunks.

They are smooth, regular, hard, resisting, movable, indolent likewise to the most energetic pressure. Their situation in the axillæ and in the groins made me think at first that it was a hypertrophy of the lymphatic glands; but their existence in the forearm, and in many places where these glands are absolutely deficient, led me to withdraw this first hypothesis which resembled that given in the case observed by Wharton. The idea that it originated, in this case, from multiple *nercoma* was very admissible; but the indolence of the tumors, likewise their great number in places where the nervous trunks are not very abundant, contributed to making me repeat this second hypothesis. On the other hand, it was difficult to believe them fibrous tumors, seeing the mobility of the tumors, and they are likewise more connected with the skin. We decided then, in order to clear up the diagnosis, to incise one of these productions, and, for that purpose, we chose one of them superficially situated on the anterior face of the right thigh. This tumor, pressed between the two fingers of the left hand, was punctured by means of a lancet; a clear fluid escaped; it was limpid and transparent; pressure pushed out at the same time a transparent or opaline membrane, a kind of cyst wall, which was examined under the microscope. This cyst presented two parts: the first and larger sac was found incised, and in its interior there was a smaller sac. The examination of the first of these sacs led us to think of a vesicular worm; the second, permitted us to see the hooks of this worm. We then recognized the existence of a *cysticercus*; and as there was reason to believe that the numerous tumors presented by our patient did not differ from the latter, the diagnosis was *cysticercus cellulosæ*. However, the patient, frightened by the operation, though it was not at all severe, and especially

disquieted by the interest that we took in her affection, demanded her discharge. We asked her to return, and, on January 5th, finding herself without money, she again came and asked us to admit her.

The condition in which we find her at this period is as follows: Medium weight; slight discoloration of the integument; dyspnoea and breathlessness while walking or while in the act of climbing stairs; diminution of muscular strength for about a year past; and rapid fatigue principally in the inferior extremities. The sub-cutaneous cellular and inter-muscular tissue is the seat of small olivary tumors, very hard, movable and absolutely indolent; some projecting under the skin, others more deeply situated and easily felt under the fingers. The feet are exempt from these tumors, which appear above the malleoli, at the level of the tendinous sheaths, and which are felt in great numbers in the sub-cutaneous cellular and inter-muscular tissue of the anterior and posterior regions of the two legs. The muscles of the thigh, especially the crural triceps, are filled with similar tumors; also the gluteal muscles. In the groins, these tumors are in great numbers and are situated under the fascia lata. The sub-cutaneous tissue of the abdomen contains several movable cysts. They are firm and of small volume; the hand applied upon the abdominal muscles easily perceives the sensation of these same and very numerous tumors in the interstices of the muscles. The muscles of the back are not altogether intact, but the muscles of the thorax, and especially the pectorals, are almost entirely filled by these same lesions. The hand, applied flat upon these muscles, perceives, so to speak, a sensation analogous to that experienced in pressing a bag of nuts. The superior extremities present a great number of these tumors superficially situated, and arranged according to the direction of the vessels. In the axillary regions, the sub-clavicular fossæ, and in general in the sub-cutaneous cellular tissue, as in the muscles of the neck, these tumors are extremely abundant. They are found to be also numerous under the inferior maxilla, where some are apparent under the skin. One of them, on the contrary, projected to the left under the tongue, and recalled the importance of this situation of cysticerci among hogs, from whence arose the custom in olden times of appointing inspectors (*langueyeres*) or *tongue examiners*. The masseter muscles contain a certain number; but

the tissues of the head appear to be exempt. Thus the number of tumors situated in the cellulo-adipose tissue, in the muscles or conjoined inter-muscular tissue, is so considerable that we may, without exaggeration, estimate them at more than a thousand. The disorders that they bring about are nevertheless insignificant; null, so to say; they consist only in a feeling of fatigue and heaviness, which, for some time past, made itself especially felt at the superior part of the thighs; much more rarely in the legs. Moreover, not only the strongest pressure used upon these tumors produces no painful sensation, but the tissues in which they are developed suffer in no way. Their mobility is the best indication of the slight irritation they bring about in their neighborhood. To say whether the internal organs are completely exempt from these parasites is a difficult thing. The eyesight is not troubled, and the ophthalmoscopic examination made by Dr. G. Teulon and myself, shows that there are no cysticerci in the eyes; however, the optic papilla appear to be slightly hyperæmic. The patient complains of having been several times attacked by vertigo; but far from increasing, this symptom has diminished in frequency; it is finally accompanied by no other trouble. The pulse is normal and the heart presents no appreciable disorder. There is nevertheless a dry cough accompanied by mucous sputa, a slight degree of dyspnœa, and oppression comes on easily while the patient is walking; the physical examination of the lung, it is true, reveals no certain sign of alteration; however, the right base gives a little less sound on percussion; mucous rales are sometimes perceived by the ear, and the vesicular expansion is weakened. The spleen presents an ordinary volume; the liver does not pass below the costal edges; the urine is normal; micturition is easy. Menstruation is irregular, and is sometimes accompanied by more or less acute colic. Nevertheless the uterus appears to be healthy; appetite is good, but it is not rare for the patient to be constipated; the fecal matter never contains any fragments of tænia. The peritoneum and pleura appear to be all right, and consequently the existence of cysticerci in the internal organs is not at all proved.

Such was the condition of this patient when I presented her to the Academy, the 13th of last February. Some of the members of this learned body having doubts regarding the nature of the

tumors observed on this woman, I decided to open another cyst. Prof. Richet wishing to perform this operation himself, it was allowed; he opened one just above the front part of the right wrist. When he came to the first cyst, there escaped a clear and transparent liquid, and Mr. Collin, who took the trouble of making a preparation of it, showed under the field of the microscope an entire cysticercus. This was contained, in an interior vesicle, elliptical, and, provided with a small opening, presented a head or scolex, provided with four suckers, and a proboscis armed with a double crown of hooks to the number of twenty-nine, of which fourteen were large and fifteen small. Its body was cylindrical, folded transversely, and incrustated by calcareous corpuscles. My diagnosis was thus found to be confirmed.

To recapitulate: A woman having for more than two years back tumors spread under the skin and in the muscles, without experiencing any particular alteration in her health; some vomiting bringing her to the hospital, we are attracted by the number of these tumors and their indolence; so, notwithstanding the circumstance which recalls their resemblance to fibroid tumors, it appeared necessary, in order to make a clear diagnosis, to incise one of them. This incision, performed by the aid of a lancet, gave issue to a clear, transparent liquid and to a membrane or cystic pouch, which, examined by the microscope, permitted us to discover the existence of a cysticercus. Beyond the particular interest that it presents, this case shows the importance of the application of the microscope to the clinic, and, in fact, up to this day, cases of the same sort have only been observed after death. The following observation is an example of this; it naturally finds its place here because that it gives the anatomical characteristics of *cysticercus cellulosæ*, which are lacking in my particular case.

OBSERVATION II.—P. M., aged 77 years, was received at the "Hotel Dieu," of Lyons, the 30th of November, 1862. On his entrance, he had a pulmonary catarrh, with considerable weakness; however, he could still be up; and the 9th of February, having fractured the neck of the femur, he was carried into M. Delores' ward. Small tumors arranged in the form of a crown upon the chest, also upon the arms, elbows, and in the axilla, attracted attention. A considerable œdema prevented their observation upon the inferior extremities. These tumors were

sub-cutaneous; they neither adhered to the skin nor to the deeper parts; some seemed to adhere to each other by fibro-cellular bands; the skin covering them presented no alteration; they were the size of haricot beans, hard, and the least fluctuation could not be perceived. By way of exclusion, they diagnosed fibro-plastic tumors. Shortly after his admission into the surgical service, the feebleness of the patient became more and more profound, and he finally died the 16th of April, owing to a large ulceration in the sacral region. The patient, for several months, had been drowsy, and showed a marked weakness of his intellectual faculties.

The autopsy revealed the existence of several cysticerci in the conjoined sub-cutaneous tissue. The muscles, pale and discolored, are easily broken down; they contain, the muscles of the trunk as well as the limbs, numerous cysticerci; the diaphragm contains a very large one, very nearly the size of an almond. I extracted, says the observer, nine hundred from the muscles, that which permits us to estimate the cysticerci at two thousand in the conjoined sub-cutaneous, sub-aponeurotic, and inter-muscular tissues, taking an approximated estimate of those that we have left. These cysticerci especially occupy the points of the insertion of muscles; their greatest diameter is directed parallel to the fibres, which they separate without destroying; they are thus lodged in the inter-muscular spaces. The bones, in which we have a right to suspect them; contained none; there were none in the eyes. There had been one at the base of the tongue. The liver was intact; the spleen and kidneys were exempt from cysticerci, but the pancreas contained one, and the parotid glands contained several. Three or four were found on the sides of the larynx; sixteen in the lungs; at the surface as well as in the parenchyma. The heart had one placed superficially in its anterior walls. The intestines contained neither tænia, nor worms of any sort. In the nervous centres, there were 111 cysticerci, distributed thus: 22 in the meninges; 84 in the brain; 4 in the cerebellum; and 1 in the medulla oblongata. According to their situation, these cysticerci presented differences of form and of consistency. In general, they approached more or less the form of a very elongated copaiba capsule, of which the greatest diameter varied from 15 to 30 millimetres; the smallest from 5 to 6 millimetres. Those of the brain are

separated from this general type; some have vesicular expansions, others a contraction which seems to divide them in two parts in the form of a double sac. The resistance of the vesicle is more or less great, according to the tissue it occupies. Across its transparent walls is seen a small whitish body, the size of a grain of millet; this is the scolex. At the point where this latter is attached to the vesicle is seen a small opening, which is the orifice of invagination of the animal. The length of the parasite, examined by Dr. Bertholus, varies from 10 to 15 millimetres, and its size from two to three; the head was provided with four suckers and a double row of hooks, of which the number was between 30 and 34. Around the suckers were seen small canals which anastomosed among themselves in order to form two larger ones, which ran through the whole body. This latter contained a great number of small calcareous granulations and is grooved by transverse folds, owing to the position that the invaginated scolex takes. Several of these animals were found to be living; four cysticerci had undergone a calcareous transformation, though preserving their forms, which resembled calculi. (Bonhomme, Comptes. rendus de la Societe de biologie, et Gaz. Med., 1853, p. 657.)

This observation, in which is found a detailed description of the anatomical lesions of cysticercus cellulosæ, is the clinical complement to my case, to which it has a great resemblance; unfortunately, like this last, it leaves in the shade the etiological question. The latter, nevertheless, is most interesting; the experiments of Kuchenmeister, Von Siebold, Von Beneden, Leuchart, Haubner, Baillet, Davaine, etc., having shown that it is impossible to see cysticerci developed in an animal which is made to swallow the eggs of the *tænia solium*, there is reason to believe that the disease (*ladrerie*) in our patient was produced by such a mechanism. Now, our patient having never had *tænia*, and never remembering to have been in contact with persons suffering from this parasite, it appears very likely, if we take into consideration her profession, that she took the germs of her disease from the filth which she ordinarily manipulated. I can easily conceive that, eating with the hands impregnated by a proglottis, she may have swallowed a sufficient quantity of eggs in order to account for the multiplicity of cysts which constitute this affection. She told me that she drank of unfiltered water

coming from the fountain in her part of town, but there is nothing to prove that this water contained the eggs of *tænia*. On the other hand, as she was very fond of salad, this vegetable badly cleaned might have been infested; however, it is most probable that it is owing to particular conditions of her calling that this disease was due.

The prognosis of this disease is serious, for, notwithstanding the great number of cysticerci infiltrating the conjoined sub-cutaneous and intermuscular tissue, the patient has lost little strength; she is anæmic; she has had, for nearly six months, a dry cough and progressive dyspnœa, which give rise to the fear that the lungs may be invaded by the cysticerci, so that, independently of complications which may come on, she is threatened by death from her parasitic affection.

Treatment is difficult, for in this sort of case, the cysticerci must be completely destroyed. It is necessary for us to use a substance which, taken internally, shall kill the cysticerci without injuring the organism; but this substance we know not. Shall it be phenic acid, that we shall experiment with at this time? I shall perhaps answer this question at some future time for the benefit of the Academy. A local treatment would doubtless be useful, but it would only reach the very numerous cysts spread through the conjoined sub-cutaneous tissue and in the muscles. We cannot dream of extirpating these tumors, but they might be partially destroyed at least, and, little by little, by injections used on each one of the cysts. Dr. Daraine advised me to inject two drops of alcohol, by means of Prærez' syringe, into each one of them. Unfortunately, my patient refuses to allow this treatment, so simple and, perhaps, efficacious.

This case, notwithstanding the want of certain etiological information, contributes none the less to the disclosure of the injurious influence of bad hygiene; it is a proof of the dangers resulting from uncleanness, and shows once more the importance of the part a vigilant Academy, guardian of the public health, is called upon to fulfill in a country like ours. In this connection, I will say that, replacing Dr. Gornbault, at the "hospital St. Antoine," four months since, I have been able to discover, in less than fifty autopsies, four cases of hydatid cysts. On the other hand, I have seen several individuals attacked by *tænia*, and I have been informed by a druggist that this parasite

prevails on a large scale among the inhabitants of his part of town; to such a degree, said he to me, that there is not a week passes that I am not called to treat persons affected by this parasite. This quarter, it is true, is found inhabited by a large number of Germans, who use raw or smoked pork. I must say, moreover, that the care given to the inspection of butchers' meat does not appear to me to be sufficient, and the specimens I have the honor to present are striking examples of what I have said. Here are a liver and lungs of a sheep that I purchased at a butcher's stall; you see they are infiltrated by numerous vesicular worms (ecchinococci). Now these same altered parts have been met several times by myself, either at this same butcher's or one of his partners. I make this revelation to show the danger menacing a portion of our population.

NOTES FROM PRACTICE.

By H. G. McALLISTER, M. D., Cincinnati, Ohio.

FRACTURE OF CORONOID PROCESS OF ULNA.

W. H., male, aged 15 years, fell from trestle-work 35 feet high; attempting to save himself from falling, caught hold of a brace with left hand, the whole weight of body being on the arm, causing violent action of brachialis anticus muscle, which usually is, and certainly was in this case, the cause of fracture; but that it is not always true the following case will show:

S. J., male, aged 12 years, fell from a high embankment, as he stated, directly on his elbow; the symptoms in this case were the same as in the above, leaving no doubt as to the nature of the injury. The symptoms were plain in each case, viz.: power of flexion lost; process drawn upwards on a level with coronoid; depression of humerus by action of brachialis anticus; and dislocation of ulna backwards: this symptom, however, was more intensified in degree in the latter than in the former case. There could not have been much strain or violent action of the brachialis anticus in the latter case; therefore, fracture must have been caused by direct violence, which is very unusual.

The treatment of the above cases was exactly the same—complete flexion of the arm, and bandaged so as to retain it in that position; cold was applied to allay inflammation. At the end of

the second week, passive motion was used; in four weeks from date of injury, recovery was complete and result good.

FRACTURE OF NECK OF RADIUS.

Female, aged 10 years; caused by a fall while going to school. Diagnosis of this case was somewhat obscure, but the never-failing symptoms were present, viz.: crepitus and power of pronation and supination entirely lost.

Placed arm in same position as in above cases, after making extension from elbow, being careful to place the thumb uppermost or midway between pronation and supination. Used passive motion on thirteenth day; at the end of fifth week, the union was perfect, and power of pronation and supination fully restored.

I think the dressing and positions used in these cases good with the exception of liability to compress vessels and nerves, therefore cutting off circulation at bend of elbow.

A young man, while at work in a rolling mill, was struck on the arm with a piece of rusty hoop iron, which cut off the ulnar artery about the middle of its course. Having no instruments at hand with which to tie the artery, I plugged up the orifice with charpie and a strong sol. of per. sul. iron; placing a piece of paste-board over lint to retain it; I bandaged up the arm; left dressing on for six days. There was a clot formed and subsequent recovery without tying the artery.

THE CRANIA OF THE MOUND BUILDERS.

J. W. Foster, LL. D., in a paper read before the Dubuque Meeting of the American Association for the advancement of science, speaks of finding three frontal bones in the "Kennicott Mound," near Chicago; the only part of the skeleton capable of preservation. In two instances there was a rapid narrowing in the temporal region; the plates were extraordinarily thick; the superciliary ridges were massive, standing out like ropes; orbital processes were profoundly notched; and the frontal bone was much prolonged towards the coronal suture. No one, he thinks, can view one of these fragments of a skull with its superciliary ridges projecting far beyond the general contour laterally and in front, and the low flat forehead, with its thick bony walls, without coming to the conclusion that its possessor was a ferocious brute. The prize-fighter of this day might envy such a frontispiece, adapted to withstand any degree of pommelling, or almost even to turn a musket ball.

In describing the Mound-builder's skull, selecting for the purpose one which belongs to neither the highest nor the lowest forms, he states that the frontal bone is of great strength and slopes backward, encroaching on the parietals, and giving origin to a low forehead. In the lower animals this bone becomes nearly horizontal, and is placed behind the eyes. "In proportion," says Humphry, "as the crainal portion slope sbackward, so do its facial buttresses—the nasal and angular processes—slant forwards; and in proportion as the brain is well developed and the cranial part of the bone is upright, so are the facial processes directed perpendicularly downwards. In the lower animals, for instance, they grow directly forwards, and in the best formed human skulls they grow almost vertically downwards." Such are the characters which seem to predominate in the mound builder's skulls,—characters which distinguish them from the negro on the one hand and the Teuton on the other. Individual variations occur, as might be expected, for we are not to suppose that all have been cast in a single mould. All the specimens indicate a low intellectual organization, little removed from that of the idiot.

It is the preponderance of the brain case over the facial portion of the head that gives to man his superiority as compared with the lower animals; and we estimate the intellectuality and capacity for improvement in the several races of man by the same standard. The skull in size and outline has a general conformity to the enclosed brain. The bony walls take their shape from the nervous tissue, as the shell of the oyster is shaped to accommodate its living tenant. The brain is undoubtedly the seat of mental activity; and, without endorsing phrenology in all its details, we may affirm that a particular form of skull is indicative of particular traits of character. We place the seat of the intellectual faculties in the anterior lobe; of the propensities which link us to the brute in the middle lobe; and of those which appertain to the social affections in the posterior lobe. The predominance of these divisions in a people would stamp them as either eminently intellectual, or eminently cruel, or eminently social. The Mound-builders, assuming these skulls to be typical, were doubtless neither eminent for great virtues nor great vices, but were a mild, inoffensive race, who would fall an easy prey to a crafty and cruel foe. Under the guidance of a superior mind, we can imagine that they would be content to toil, without weighing deliberately the nature or amount of the reward. Like the Chinese, they could probably imitate, but not invent; and, secure from the irruption of enemies, they would, in time, develop a rude civilization.

The Indian possesses a conformation of skulll which clearly separates him from the prehistoric Mound-builder. And such a conformation must give rise to different mental traits. His brain

as compared with the Europeans, according to George Combe, differs widely in the proportions of the different parts. The anterior lobe is small, the middle lobe large, and the central convolutions on the anterior lobe and upper surface are small. His character, since first known to the white man, has been signalized by treachery and cruelty. He repels all efforts to raise him from his degraded position; and whilst he has not the moral nature to adopt the virtues of civilization, his brutal instincts lead him to welcome its vices. He was never known voluntarily to engage in any enterprise requiring methodical labor; he dwells in temporary and movable habitations; he follows the game in their migrations; he imposes the drudgery of life upon his squaw; he takes no heed for the future. To suppose that such a race threw up the long lines of circumvallations and the symmetrical mounds which crown so many of our river terraces is as preposterous almost as to suppose that they built the pyramids of Egypt.

Dr. Lund, a Swedish naturalist, many years ago, in the bone caves of Minas Gordas, Brazil, found the remains of men associated with those of extinct quadrupeds, under circumstances which led him to believe that the whole were contemporaneous. In his communication to the Geographical and Historical society of Brazil, an abstract of which was forwarded to Dr. Morton by Leut. Strain, he says:

The question then arises, who are these people? Of what race, and what their intellectual perfections? The answers to these questions are happily less difficult and doubtful. We examined various crania in order to determine the place they ought to occupy in anthropology. The narrowing of the forehead, the prominence of the zygomatic bones, the maxillary and orbital conformation, all assign to these crania a place among the characteristics of the American race, and it is known that the race which approximates nearest this is the Mongolian; and the most distinctive and salient character by which we distinguish between them is the greater depression of the forehead in the former. In this point of organization, these ancient crania show not only the peculiarity of the American race, but this peculiarity, in many instances, is in excessive degree, *even to the entire disappearance of the forehead.*

"We know that the human figures found sculptured on the ancient monuments of Mexico, represent, for the greater part, a singular conformation of head, being without forehead, the crania retreating backward immediately above the superciliary arch. This anomaly, which is generally ascribed to an artificial disfiguration of the head or taste of the artist, now admits of a more natural explanation, it being proved by these authentic documents, that there really existed in this country a race exhibiting this anomalous conformation. The skeletons, which were

of both sexes, were of the ordinary height, although two of them were above the common stature. These heads, according to the received opinion in craniology, could not have occupied a high position intellectually.

Rivers and Tshudi, whose researches in South America command confidence, believe that the artificial disfigurement of the skull which prevailed among the Inca-Peruvians owed its origin to the prior existence of an antiochthonous race having this peculiarity; and they further state that it is in some instances congenital, as it is seen in the *foetus* of the Peruvian mummies.

These authorities would indicate that there was a conformity in the craniology of the earlier races on this hemisphere, embracing the primeval people of Brazil, the platform-builders of Peru and Mexico, and the mound-builders of the Mississippi valley.

The Peruvian skull, as compared with the Indian, is deficient in capacity, being, according to Morton, no greater than that of the Hottentot or New Hollander. In measuring 155 crania of the former, they gave but 75 cubic inches for the bulk of the brain, while the Teutonic crania gave 92 inches. The average difference between the Peruvian and Indian is 9 inches in favor of the latter.

How is it then, it has been asked, that with this low mental power, these Peruvians should have been able to construct such stupendous works, and develop a very considerable civilization, while the Indian with far greater volume of brain, exhibits such slight constructive power, and has resisted all attempts to elevate his condition? Mr. J. S. Phillips has attempted to answer this question:

"The intellectual lobe of the brain of these people, if not borne down by such overpowering animal propensities and passions, would, doubtless, have been capable of much greater efforts than any with which we are acquainted, and have enabled these barbaric tribes to make some progress in civilization. * * The intellectual and moral qualities of the Mexicans and Peruvians are left more free to act, not being so subordinate to the propensities and violent passions."

Leaving out the English skull, which shows a good degree of intellectuality, it may be said, that the earliest types of man are inferior, as indicated by the Neanderthal skull, as well as those recovered from the Danish and British tumuli, to say nothing of the strange, human jaw found by Dupont in Belgium, which approaches those of the anthromorphous apes, and another jaw of analogous traits found by the Marquis de Vibrage in France, both of which are supposed to be referable to the dawn of the human period. There is nothing to indicate modern degeneracy, whether applied to the intellectual or physical capacity of the Teutonic race. So far from it, there are strong grounds for believing that our remote ancestors lived in brutal barbarism,

with modes of thought and daily pursuits far different from those of the educated and much-planning man of to-day; and that, through a state of progression, long continued, often checked, but still acquiring strength to advance, a portion of the human family have been able to attain a high degree of civilisation—civilisation which implies intellectual culture and an ability to render the forces of nature subservient to human wants and conveniences.

THE NEWLY-DISCOVERED HÆMATOZOON INHABITING HUMAN BLOOD.

We announced in a few lines in the course of the summer, the discovery, by Mr. Timothy Richard Lewis, M.B., Assistant-Surgeon to H. M. British Forces, on special duty, attached to the Sanitary Commissioner with the Government of India, of a new worm found in the blood and in the urine of certain patients who had come under Mr. Lewis's notice in India. We have been favored with an article describing this parasite and the cases in which it was found. The article is contained in the Report of the Sanitary Commissioner with the Government of India, just published, and will be read with much curious interest by all helminthologists. Certain limited portions of large vessels, as those of the portal system, have often been invaded by *Distomata*. But the condition described by Mr. Lewis is one in which the whole blood is infested with living active worms about 1.75th of an inch in length, and with a transverse diameter of 1.3500th of an inch—"a condition," says the discoverer, "in which they are persistently so ubiquitous as to be obtained day after day by simply pricking any portion of the body, even to the tips of the fingers and toes of both hands and both feet of one and the same person with a finely-pointed needle. On one occasion six excellent specimens were obtained in a single drop of blood, by merely pricking the lobule of the ear."

Filaria sanguinis hominis is the name first given to this hæmatozoon in *The Lancet*, and Mr. Lewis proposes to retain it. Its appearance on first being removed from the body is very characteristic. It moves about incessantly, coiling and uncoiling itself unceasingly, lashing the blood-corpuscles about in all directions, and insinuating itself between them. A young Bengalee compared it not inaptly to an incompletely-developed snake. At first the worms look translucent; the large specimens, however, frequently presenting an aggregation of granules towards the junction of the middle and lower half. Occasionally a bright spot is seen at the thicker extremity, suggestive of a mouth. They continue active from six to thirty hours. In the latter period of their existence the movements of filariæ become much slower,

and the plasma of their bodies more granular, until all signs of activity disappear. The hæmatozoon is enveloped in an extremely delicate tube, closed at both ends, within which it is capable of elongating or shortening itself. Mr. Lewis infers, from the fact of its being so enclosed in a structureless membrane, that its home is the blood, and that it has no means of perforating the tissues.

The question arises as to the origin or morbid significance of these filariæ. Mr. Lewis first noticed them two years ago in the urine of a patient much emaciated and passing chylous urine. In July of the present year, whilst examining the blood of a native, suffering from diarrhea, he observed nine minute nematoid worms in a state of great activity on a single slide. He and Dr. Douglas Cunningham agreed that the worms were of the same kind as had been observed in the patient with chylous urine. Mr. Lewis has examined the urine in from fifteen to twenty cases of chyluria, associated with more or less marked hæmaturia, chiefly, by the way, in women, and *the microscopic filariæ have been present on every occasion*. Of the persons thus affected, five were of pure European parentage, but three of them were born in India; the remainder were either East Indians or natives in about equal proportion. The patient in whose urine the filariæ were first detected in March, 1870, disappeared, but Mr. Lewis has lately seen him. The urine looks healthy, but the blood contains hæmatozoa. The following is the summary with which the author concludes the account of his interesting and important discovery:

“(1) It has been shown that the blood of persons who have lived in a tropical country is, and not rarely, invaded by living microscopic filariæ, hitherto not identified with any known species, which may continue in the system for months or years without any marked evil consequences being observed; but which may, on the contrary, give rise to serious disease and ultimately be the cause of death.

“(2) That the phenomena which may be induced by the blood being thus affected is probably due to the mechanical interruption offered (by the accidental aggregation, perhaps, of the hæmatozoa) to the flow of the nutritive fluids of the body in various channels, giving rise to the obstruction of the current within them, or to rupture of their extremely delicate walls, thus causing the contents of the lacteals, lymphatics or capillaries, to escape into the most convenient excretory channel; such escaped fluid, as has been demonstrated in the case of the urinary and lachrymal or Meibomian secretion, may be the means of carrying some of the filariæ with it out of the circulation: these occurrences being liable to recur after long intervals—so long, in fact, as the filariæ continue to dwell in the blood.

“(3) That, as a rule, a chylous condition of the urine is only

one of the *symptoms* of this state of the circulation, although it appears to be the most characteristic symptom which we are at present aware of.

"(4) And, lastly, that some of the hitherto inexplicable phenomena, with which certain tropical diseases are characterized, may eventually be traced to the same, or to an allied condition; hence, it becomes *imperative* to subject the blood of patients suffering from obscure diseases, in tropical countries at all events, to *thorough* microscopic examination."—*Lancet*.

MEDICAL GLEANINGS.

VALUE OF MYRRH.—Dr. de Savignac, in speaking of this drug, remarks that he has seen painful dyspepsia rapidly relieved, and even cured, by the use of this gum-resin, either prescribed alone or in combination with other medicines, as bismuth, bicarbonate or soda, etc. Myrrh in these cases relieves the pain, awakens appetite, gives tone to the stomach, and renders digestion more active and regular. Besides these actions, it proves a general tonic in those gastralgiae that are connected with various chronic diseases, and particularly with anemia and chlorosis. But this last is often accompanied by amenorrhea, and as strength returns the catamenia reappear. Cullen regarded myrrh as being only indirectly an emmenagogue; but Sydenham and many others have thought it exerted a direct action on the uterus. Its pectoral properties, he thinks, have been exaggerated, though it may aid other remedies in calming the cough and facilitating expectoration. He has found it particularly useful in vaginal and uterine catarrhs, and especially when applied topically in the form of vaginal injections, containing one to three drachms of tincture or vinegar of myrrh in a quart of water. Mattioli and some others have prescribed it with success in intermittent fevers, but further evidence is required on this point. Alibert admits its value as a topical remedy in skin affections, and it has been largely used for ulcers, for the dressing of wounds, and cases of caries and necrosis, and as an antiseptic in wounds of the soft parts of a bad nature, likely to become gangrenous. For this purpose the tincture of myrrh is best adapted. As an internal remedy, acting as an excellent stomachic, he strongly recommends the following prescription for the wine of myrrh:

Picked myrrh	20 grammes.
Rind of Seville oranges,	15 "
Malaga wine,	1½ pint.

Macerate for ten days, and filter.

ON THE USE OF ERGOT OF RYE IN DYSENTERY.—M. Luton, of Rheims, states (*Gaz. Hapdomadaire*, Oct. 1871) that during an

epidemic of dysentery which lately prevailed at Rheims, he employed in the cure of the disease most of the remedies which are considered efficacious, and met with various degrees of success. The epidemic was not a very severe one, and most of the patients recovered; but, in the majority of the cases, it appeared to M. Luton that the therapeutical action was not very evident, nor the relief rapid; and, moreover, some of the patients, especially among the most aged, died. It was, therefore, desirable that some new method of treatment should be found, which might give more satisfactory results, and the opportunity of doing so was offered by the case of a female patient, who was suffering at the same time from uterine hemorrhage and dysentery. The ergot of rye was prescribed successfully for the former malady, and it was found that the latter was likewise benefitted by the remedy; and, in fact, as soon as the first doses had been given, a condition of constipation was induced, which lasted for four or five days. This first experiment led to the use of the ergot in simple dysentery, and it was found that an improvement in the symptoms, and eventually a complete cure, followed the new plan of treatment. M. Luton gave the ergot in powder, in the dose of 3 grammes (about 45 grains) a day, divided into doses of 50 centigrammes (about $7\frac{1}{2}$ grains); and two or three days generally sufficed for a cure in ordinary cases. The ergot appeared to attack not only the hemorrhagic element of dysentery, but the whole disease; and the mucous secretions, the griping, colic, and fever, were equally relieved at the very commencement of the treatment.—*Brit. and For. Med. Chir. Rev.*, April, 1872.

SPERMATORRHOEA IN WOMEN.—In the July number of this year, page 333, I called attention to the cause of certain nervous lesions in women, hoping that our readers would give the subject that attention it surely deserves. No physician in general practice, especially in the older sections of our country, but must have noticed these nervous lesions, and have been at a loss to account for them. And I may add that I have met no one who has not experienced difficulty in their treatment.

From a number of letters that have been received since the publication of the article, I am glad to know that others have made similar observations. I give an extract from one:

“Your article in the July number, ‘Spermatorrhœa in women,’ has recalled many cases to my mind, and I must say that I never yet met with a man or woman that seemed to look at this thing just in the light I have viewed it for the last several years. My facilities for observation are ample, especially in diseases of women, for I have the management of nine-tenths of the business throughout this part of the country, and I must say that the conclusions arrived at in your article are, so far as my observation goes, strangely correct. I have had much trouble with many of these cases, especially in married women of ner-

vous constitutions. The complications of these cases are many and sometimes the diagnosis difficult to make, but I am satisfied we're 'nearing the shore,' and in time, shall be able to manage these cases with some degree of certainty and with greater satisfaction to our patients. I could report some very interesting cases in this relation, but shall wait for further observation, and in the meantime hope you may enlarge on this subject in your editorials, and give us symptoms and treatment of particular cases.'

If it was really necessary, I could make it the text for a series of articles that would startle our readers, and might disgust them, from the very nature of the facts stated. These are tabooed topics, and physicians shrink from them, and fail to give them the consideration they so well deserve.

The cause of very many of the diseases of women we meet with is—marital abuse. It is the cause of much suffering, it shortens life, and it gives an enfeebled progeny. There are opportunities of impressing these facts upon the people. It comes to the physician when his aid is solicited in the treatment of these peculiar diseases, and when necessary, let him state the facts clearly, and point out the cause of disease.

There is a community of interest among women, and they are ever ready to communicate with one another. Learn one woman her "marital rights," or rather her "marital wrongs," and you will soon find that you have indoctrinated a considerable part of the community. An active tongue is a good thing in some cases, it surely will be in this.

Would you wrong the husband? By no means; I would right him. In this matter he surely needs to be righted. Would you conspire against his peace? By no means. I have found, when necessary, that it is best to talk plainly to the husband—he readily sees the wrong, and just as readily agrees to right it.

NITRIC ACID IN PERTUSSIS.—

R	Acid Nit. dil.	f 3 xij	
	Tinct. Card. comp.,	f 3 iij	
	Syrup simple,	f 3 iijss	
	Water,	f 3 j	M.

Of this, a teaspoonful is given as a dose every hour or every second hour, to be followed with a gargle of solution of carbonate of soda to prevent the action of the acid upon the teeth.

ANIMALCULES IN BUTTERMILK.—Dr. J. P. Browne, of Galt, Ontario, in the *Canada Lancet* for August, gives an account of a family poisoned by drinking buttermilk, which, on examination with the microscope, was proved to contain immense numbers of animalcules. He thinks the germs which produced them were taken in by the cow in the water she drank, and found their way into her blood through the lacteals. The symptoms were those of narcotico-irritant poisoning, viz: vomiting, purging, cramps,

dentists having lost their instruments, he prescribed 20 grains of hydrate chloral, to lessen the pain and procure rest until he could obtain the necessary forceps. To his astonishment, in every case, the ache not only promptly vanished, but failed to return. He has now tried this plan in about 20 cases with quite uniform success.

IN SPASM OF THE GLOTTIS.—A German medical journal says that Dr. Rehn treated a threatening case of spasm of the glottis, in which the attacks were very severe and frequent, with chloralhydrate. The attacks were perceptibly lessened and finally quitted. The child thus treated was seven months old. The medicine was well borne, and produced no disturbances of digestion,

PROFESSOR TYNDALL'S BATTERY.—This consisted of a series of Grove's cells arranged in a somewhat peculiar manner. The outside was made of ebonite or hard rubber, and was rectangular in shape, about six inches deep, and four by two and a half inches in its other dimensions. Within this was placed a strip of rolled zinc, bent into the form of a U, with one leg considerably longer than the other; this was as wide as could be conveniently placed in a cup. The long leg was bent at a right angle and extended over the next cup, the end of it being bent slightly upward; to this end was attached a piece of platinum slightly narrower than the zinc. Inside of the U was placed a flat porous cup, the bottom resting on the bend of the zinc; this cup contained the nitric acid, and into it dipped the strip of platinum. Six of these cells were placed in a wooden box that held them compactly together so that they could be easily transported.

OXALATE OF POTASH IN PERITONITIS.—Two cases of peritonitis with purulent effusion, the pus discharging itself by the umbilicus, have been reported this year to the Medico-Chirurgical Society, of Liege, as resulting successfully. Other cases have also been reported, in which small doses of oxalate of potash in mucilage were given every hour, with the best results, the patients being perfectly and speedily restored to health.—*Georgia Med. Companion.*

OZOKERIT IN SKIN DISEASES.—H. S. Purdon, M. D. (*Dublin Quarterly Journal of Medical Science*), recommends ozokerit, or vegetable wax, in the treatment of chronic affections of the skin, eczema of long standing, unaccompanied by much infiltration of the subcutaneous cellular tissue, tinea, scabies, and psoriasis. He states that it is as valuable as carbolic acid, oil of cade, or tar. Its action is regarded as that of a stimulant to the skin.—*Med. Record.*

XYLOL IN SMALL-POX.—Dr. Nagel says: "I have administered xylol in eighty-one cases of small-pox; among these were eight children under two years of age—six of them not vaccinated; eleven children from two to ten years of age—four of them not vaccinated; twenty patients

under twenty-five years of age; the others were above that age, and one was aged sixty. Of all these eighty-one patients (thirty-four of whom had the small-pox in its worst form) only four died—one child, three weeks old, not vaccinated; another child, nine months old, not vaccinated, and two adults of about thirty-two years of age. I conclude, therefore, that,

"1st. Xylol produces positively better effects in the treatment of small-pox than any other remedy known.

"2d. Xylol positively mitigates the severity of the disease, accelerates the recovery, and prevents the hitherto great mortality.

"3d. Xylol, administered when a contagion is suspected, and before the eruption of the disease, does not prevent the breaking out of small-pox, but facilitates the elimination of the disease.

"Under these circumstances, I can do no less than most warmly recommend the administration of xylol."

The dose of xylol, as a prophylactic, is ten to fifteen drops once a day. During the progress of the disease, the same dose is given four times a day. As much as a teaspoonful has been taken at a time without serious results. It is administered in wine, syrup, or water. Raspberry syrup is especially recommended.

CARBOLIC ACID IN SMALL-POX.—Dr. A. Löffler states, in a Vienna medical journal, that he has treated more than forty cases of small-pox by the external copious application, by means of cotton wool, of a solution of one part of carbolic acid in twelve of oil. The result in all the cases was that the cutaneous swelling soon diminished; and that, when the application was made early, the course of the disease, in relation to the number of pustules, was milder. He believes, also, that by this treatment, the danger of infection was greatly diminished.

Book Notices.

HEWITT ON WOMAN—A new, enlarged, and improved edition, with new illustrations.—The Diagnosis, Pathology, and Treatment of the Diseases of Women, including the Diagnosis of Pregnancy. Founded on a course of lectures delivered at St. Mary's Hospital Medical School. By GRAYLY HEWITT, M. D., Lond., M. R. C. P., Physician to the British Lying-in Hospital; Lecturer on Midwifery and Diseases of Women and Children at St. Mary's Hospital Medical School; Honorary Secretary to the Obstetrical Society of London, etc. The third edition, revised and enlarged, with new illustrations. Octavo. Philadelphia: Lindsay & Blakiston. Cincinnati: R. Clarke & Co.

Prof. Graily Hewitt gives us a new, enlarged, and very greatly improved edition of his treatise on "Diseases of Women," with numerous new illustrations.

He has really re-written the former edition, embodying his extensive clinical experience, making this edition a most complete and thorough work on all that pertains to the pathology and treatment of diseases peculiar to women.

Dr. Hewitt, while physician to the female ward of the University College Hospital during the past four years, had about twelve hundred cases, of which he has carefully given statistics in this edition. This bed-side experience has greatly aided him in carrying out the clinical character of his treatise, thereby adding to its practical value.

What is especially commendable in this edition is a very full and clear exposition of *pathology* and *diagnosis*, which, with the numerous illustrations of *mechanical* treatment, makes it invaluable as a text-book for students, and a guide to the practitioner.

In reference to the prime element in the cause of uterine disease, Dr. Hewitt claims that a large per cent. is due to flexions; thus controverting the inflammatory theory of Dr. Henry Bennet.

On this point, we quote from the second page, as follows:

"Facts incontrovertibly appear to show that instead of beginning with a description of inflammation of the uterus as a starting-point in uterine pathology, we have to begin with certain alterations of the uterus, which very commonly, nay, almost constantly, cause this inflammation, viz.: those alterations in the form of the uterus which are now spoken of as flexions.

"The whole truth is not expressed by the foregoing statement, but the views I shall proceed to develop more at length may be concisely stated as follows;

"a. Patients suffering from symptoms of uterine inflammation (or, more properly, from symptoms referable to the uterus) are almost universally found to be affected with flexions or alterations in the shape of the uterus of easily recognized character, but varying in degree.

"b. The change in the form and shape of the uterus is frequently brought about in consequence of the tissues of the uterus being previously in a state of unusual softness, or what may be often correctly designated as chronic inflammation.

"c. The flexion once produced is not only liable to perpetuate itself, so to speak, but continues to act incessantly as the cause of the chronic inflammation present.

"Logically, and indeed practically, there are good reasons for placing flexions first in the order of sequence. Admitting the powerful predisposition to flexion produced by a soft condition of the uterus, the softness is not always the nature of inflammation, for flexion not uncommonly, as after parturition, may be brought about by over-straining, the uterus being simply softer or larger than usual. And, again, accidents or over-exertions frequently give rise to flexions in the non-gravid state, without any decided evidence of previous uterine inflammation. These statements are made in this particular place in order that misconception may not prevail as to the precise nature of the end and aim of the pathology of the uterus which I now seek to develop in detail."

This volume contains also a feature not usually found in works on diseases of women: a very elaborate chapter on the "Diagnosis of Pregnancy," for which the author is so justly celebrated. M

ATTHILL'S CLINICAL LECTURES ON DISEASES PECULIAR TO WOMEN.

By LOMBE ATTHILL, M. D., Fellow and Examiner in Midwifery, King and Queen's College of Physicians, etc. Demy octavo, with illustrations. Second Edition, revised and enlarged. Philadelphia: Lindsay & Blakiston. Cincinnati: R. Clarke & Co.

This volume contains the substance of clinical lectures delivered at the Adelaide Hospital. Dr. Atthill has, by publishing these lectures, supplied a great want to the student by furnishing a hand-book on diseases peculiar to women that is concise, compact, and inexpensive.

This little volume, although not purporting to be a complete treatise on diseases peculiar to women, nevertheless embraces the diseases most frequently met with in every day practice, and being treated of in a thoroughly clinical and practical manner, making it a work that we can strongly recommend to the student or busy practitioner. M

EDITORIAL.

TRANSACTIONS OF THE TWENTY-SEVENTH ANNUAL MEETING OF THE OHIO STATE MEDICAL SOCIETY.

By an oversight we neglected the notice of this work, which we should have made two or three months ago. It is a 12mo. volume of 286 pages, gotten up in the usual tasty manner of the Secretary, Dr. Hadlock.

The book contains quite a number of interesting papers read before the Society. Several of them have been published in the *News*. Among others, there is a paper, by Dr. S. S. Scoville, of Lebanon, on Nervous Influence; a Report on Medical Chemistry, by J. B. Hough, M. D., of Warren Co.; on Amputations, by J. H. Kearney, M. D., of Cincinnati, etc. etc. Notwithstanding the book contains a number of essays that detract from its merit, it is quite worthy of a place in one's medical library.

Editorial.

A NEW VOLUME.—With the beginning of the New-Year, we commence a new volume of the *MEDICAL NEWS*. The year that has just closed has been one of prosperity with our journal, and we feel much encouraged in the continuance of its publication. Five years ago we set out in the superintendence of the issuing of a medical monthly that should represent the progress of medicine so far as the capacity of its pages would allow, and from that time to the present have we been engaged in the work; and if we are to judge of the success we have met with from the patronage that was first extended to the *Medical Repertory*, and afterwards to the *MEDICAL NEWS*, we must regard it as quite flattering.

The *MEDICAL NEWS* is taken everywhere throughout the United States, and is received in exchange by many of the principal foreign journals. We have the largest circulation of any medical journal published west of the Alleghany Mountains, and we do not think that more than one or two published in the East equal it. In looking over our mail book, it would seem that more or less copies are taken at nearly every postoffice throughout the whole country.

The cause of the great success we have met with is quite evident—the intrinsic value of the journal, and the cheap rate at which it is issued. While we would not pretend that *every article* that has found a place in the *News* has been of the highest standard of excellence, or even worthy of second rank, yet we have no hesitation in maintaining that the articles, both original and selected, will average with those published in any of the home or foreign journals as regards practical usefulness and exhibiting actual advance in medicine. As regards cheapness, the *MEDICAL NEWS* gives twice as much reading matter for the same money as any other medical periodical published in the United States. Take throughout the year its forty-eight closely printed pages issued monthly, and it will be found that our journal gives as much reading matter as any of the three-dollar monthlies.

We have endeavored to publish a medical journal devoted to the interests of the medical profession, and not to any particular party or clique. Of course the editorial staff have advocated, and will continue to do so, such interests as have suited their own notions, and have permitted no one to do their thinking for them, yet it has sedulously been the effort to be governed by right principles, and to labor for the pro-

fessional good. Our pages have been open to every physician who had anything to say worth communicating. No little clique of a half-a-dozen have been permitted to monopolize them with clinical lectures, delivered to mythical audiences, made up from text books and hospital reports; or with fictitious accounts of artificial conceptions with a pewter syringe; or records of pretended cases of spontaneous rabies in the human being in which a minute account is given of the examination of the blood by the microscope, a toy instrument being used that has not sufficient definition to disclose the markings on the proboscis of a blow-fly, much less those on the pygidium of a flea. We have avoided sham and trickery of every kind. Those who have a penchant for such stuff, and there are many of that kind, take a *weakly* periodical.

We enter upon the new year very much encouraged by the success we have met with in the past. As in the past so in the future, it will be our aim to deserve patronage; and, in our effort to do this, we will seek to make the *News* a better journal than ever. While we have reason to believe that our subscribers have been very well satisfied with us, we think we can improve on the labors of the past.

We wish all our subscribers a happy New Year, and hope they may all live to see many more. Death, however, will come sooner or later and end the career of each one of us, but we hope that when we come to pass from time that each of us may feel that he has not lived in vain—that the world is something better for his having lived in it. With this feeling much of the regret of passing from life will be taken away. But in order that we may be enabled to exclaim, " 'tis finished—our task is completed; now let us depart," we must be up and doing while we live, for there is much to do. No idler can finish his work. The field of medicine is broad, very broad; it not only embraces the application of remedies in the curing of disease, but also the preventing of disease, the relation of mind and body, hereditary influence, and many other matters, as personal and general morals. Now he who would feel that in the discharge of his duties as a physician—and every one should—that he should not only have all the knowledge in this wide scope, but should even extend it that he may use it for the benefit of his fellow beings, must be up and doing—there is no time to waste.

In conclusion, we will again say that we wish all a happy New Year.

ANIMALCULES IN HUMAN BLOOD.—Our readers should not overlook the article from the *Lancet*, on "The Newly Discovered Hæmatozoon Inhabiting Human Blood." Our space is too limited for us to make any remarks at the present time.

ADVANCING DEFINITION OF MICROSCOPIC OBJECTIVES.—In a note published in the *American Naturalist*, of December, 1872. Dr. Woodward, of the Army Medical Museum, says: "Last month I received from Mr. Tolles an objective made to fill an order of long standing for the Army Medical Museum. The immersion front of this objective (marked one-eighteenth by the maker) separates the lines of Nobert's plate, from the lowest to the highest band, more satisfactorily than any objective I have hitherto tried. I must also give its performance on *Amphipleura pellucida* by lamplight the preference over any similar work I have done or witnessed. The price of this objective was \$175."

We are glad to chronicle the triumph of American makers in excellence of defining power in the manufacture of microscopic objectives. Heretofore, Powell and Lealand's immersion one-sixteenth was regarded the finest defining lens that was ever produced, and indeed its qualities in this respect are most wonderful; but, we presume, in time to come, if Mr. Tolles can reproduce them, his one-eighteenth, for a while, is to bear away the palm. Powell and Lealand's immersion

one-sixteenth resolves the nineteenth band of Nobert's plate; and we have in our possession some photographs of its resolution of the markings of the *Amphipleura pellucida*, which are remarkable for their sharpness of outline. We have the glass, but we seldom use it as it is quite useless for any other work than that of resolving diatoms.

A difficulty in the way of Mr. Tolles' work is, besides its excessively high price, a want of uniformity in its quality. An ordinary customer in ordering one of his eighteenth could not rely on having made for him one of equal fineness of definition as that furnished the Army Medical Museum. He could depend upon having \$175 to pay for it, but nothing more. Mr. T. always declines, in accepting an order, to give any guarantees or to make any promises.

We hope a new era will be brought about in the manufacture of microscopic objectives in this country through the coming and settling among us of Mr. E. GUNDLACH, the famous German maker. His lenses are unsurpassed in their performance and are very reasonable in price. We hope soon to have the pleasure of testing his one-sixth and one-twenty-fourth made in the United States, and to report the result to our readers.

SIR THOMAS BROWNE maintained that every man at his birth was nine months old; and Coleridge has said, probable in reference to this, that "the history of a man for nine months preceding his birth would probably be more interesting, and contain events of greater moment than all the three-score and ten years that follow it."

EPIDEMIC DELUSIONS.—In the third series, "Science Lectures for the People," Dr. Carpenter gave two lectures, one on the "Unconscious Action of the Brain," the other on "Epidemic Delusions." In the latter, after remarking that "in certain merely physical conditions, mere bodily states, there is a tendency to the propagation, by what is commonly called imitation, of very strange actions of the nervous system," he gives the following among other illustrations of the fact:

"In nunneries, it is not at all uncommon, from the secluded life, and the attention being fixed upon one subject, one particular set of ideas and feelings—the want of a healthy vent, so to speak, for the mental activity—that some particular odd propensity has developed itself. For instance, in one nunnery abroad, many years ago, one of the youngest nuns began to mew like a cat; and all the others, after a time, did the same. In another nunnery, one began to bite, and the others were all affected with the propensity to bite. In one of these instances, the mania was spreading like wild-fire through Germany, extending from one nunnery to another; and they were obliged to resort to some such severe measures as I have mentioned, to drive it out. It was set down in some instances to demoniacal possession, but the devil was very easily exorcised by some pretty strong threat on the part of the medical man. The celebrated physician Boerhaave was called in to a case of that kind in an orphan asylum in Holland, and I think his remedy was a red-hot iron. He heated the poker in the fire, and said that the next girl who fell into one of these fits should be burnt in the arm; this was quite sufficient to stop it. In Scotland, at one time, there was a great tendency to breaking out into fits of this kind in the churches. This was particularly the case in Shetland; and a very wise minister there told them that the thing could not be permitted, and that the next person who gave way in this manner—as he was quite sure they could control themselves if they pleased—should be taken out and ducked in a pond near. There was no necessity at all to put his threat into execution. Here, you see, the stronger motive is substituted for the weaker one, and the stronger motive is sufficient to

induce the individual to put a check upon himself. I have said that it usually happens with the female sex, though sometimes it occurs with young men who have more or less of the same constitutional tendency. What is necessary is to induce a stronger motive, which will call forth the power of self-control which has been previously abandoned."

CINCINNATI COLLEGE OF MEDICINE AND SURGERY.—Our readers should notice the cut on the back of the cover of the *NEWS*, representing the fine new structure of this institution. If in times past, it could be alleged against the college that it was behind others in the matter of a building, no such charge can now be justly made: for, in this respect, instead of being behind, it is rather ahead. In external appearance, it is highly ornamental to the neighborhood in which it is located, while in its internal arrangements it is the admiration of all who have examined it. We do not believe that any excel and but few equal it in its conveniences and general adaptation for its purposes.

It will be noticed by reference to the advertisement that the spring and summer term of Lectures will begin Tuesday, March 4th, and continue until the last of June. From the many letters of inquiry received and from other sources of information, it is known that the coming session will be marked by more students in attendance than that of any other spring or summer term ever held in Cincinnati. It will be the aim of the faculty to render the school more and more worthy of the patronage it is receiving, and to keep it in the front ranks as a school of scientific attainments and sound practical acquirements.

SAFEGUARDS AGAINST MURDER.—Mr. Henry L. Clinton, in a recent letter to the *New York Times*, proposes to amend the present law so that unpremeditated homicide (not justifiable nor excusable) should be murder in the second degree, and be punishable by imprisonment for life; and also to make a law by which a murderer, acquitted upon the plea of insanity, shall be consigned to a lunatic asylum for twenty or thirty years. He says, very forcibly:

"The defence of insanity has been so perverted and abused in capital cases as to bring shame and reproach upon the administration of justice. If a person be really insane at the time he commits a homicide, law, justice, and humanity demand that he should not be convicted. But the community should certainly be protected from the violence of insane persons. If a person is so insane as to take human life, he should be confined for a sufficiently long period to protect the community against any return of such violence. I think that if such a person commits a homicide under such circumstances, that it would be murder were he sane, a confinement in a lunatic asylum for twenty or thirty years would not be too long. If such were the law, a sham and spurious defence of insanity would not often be interposed. If insanity were real, no injustice could be done. If the jury acquit on this ground, they should so state in their verdict. If the period of confinement in a lunatic asylum following such acquittal which I have suggested be too long, the Legislature might fix a shorter period; but some certain term of confinement ought to be prescribed by statute."

ANTIQUITY OF MAN IN AMERICA.—The discoveries that are constantly being made in this country are proving that man existed on this continent as far back in geological time as on the European continent; and it even seems that America, really the old world geologically, will soon be the birthplace of the earliest race of man. One of the late and important discoveries is that, by Mr. E. L. Berthand, which is given in full, with a map, in the Proceedings of the Philadelphia Academy of

Sciences for 1872, p. 46. Mr. Berthand there reports the discovery of ancient fireplaces, rude stone monuments, and implements of stone in great number and variety, in several places along Crow Creek in Colorado, and also on several other rivers in the vicinity. These fireplaces indicate several ancient sites of an unknown race differing entirely from the mound-builders and the present Indians, while the shells and other fossils found with the remains make it quite certain that the deposit in which the ancient sites are found is as old as the Pliocene, and, perhaps, as the Miocene. As the fossil shells found with the relics of man are of estuary forms, and as the sites of the ancient towns are on extended points of land and at the base of the ridges or bluffs, Mr. Berthand thinks the evidence is strongly in favor of the locations having been near some ancient fresh water lake, whose vestiges the present topography of the region favors.—*Naturalist*

THE LADIES' REPOSITORY.—The thirty-third volume of this long-established religious and family magazine, which has won for itself the appropriate title of *Queen of Monthlies*, commences with January, 1873. Only \$3.50 per annum. Each number of this splendid journal contains *eighty superroyal octavo pages*, double columns. It is printed on the finest calendered paper, and each month is embellished with two original *steel engravings*, executed in the best style of the art. For amount and quality of reading matter, for mechanical execution and illustrations, the *Ladies' Repository* will compare favorably with any other magazine published in the country.

The publishers propose the widest range in the literary matter: Essays, Disquisitions, Tales and Adventures from real life, Biographical and Literary Sketches, Poems, and Papers on subjects of practical value. The grave questions of Science, History, and Religion will be discussed as fully as their importance demands and as space will admit of.

The *constant aim* will be to produce a magazine that shall meet all the literary wants of all the members of the Christian family, and which every lady of culture will regard a welcome visitor.

\$3.50 per year, in advance; \$1.75 for six months, in advance.

Subscription to begin either with January or July.

Remit by postal money order, draft, or express.

Address, HITCHCOCK & WALDEN, Publishers, Cincinnati, Chicago, or St. Louis.

HEARTH AND HOME.—This most excellent family journal has finished its *fourth annual* volume, and with the new year commences its fifth. Beyond a doubt, it is the best family paper with which we are acquainted. Every number is replete with interesting reading matter and fine illustrations. Its stories, for it very properly has stories, are of a kind that tend to instruct and make better.

In the matters of the farm and garden, it is of especial interest to country readers; for it gives especial attention to such subjects.

Subscribers for 1873 will have presented to them a large and very valuable and beautiful **CHROMO**, in eighteen colors, that will of itself be worth many times the year's price of the paper.

Published by Orange Judd, 245 Broadway, New York, at \$3 a year.

THE FARMERS' ADVOCATE is the title of a large quarto monthly paper of sixteen pages, published at Jackson, Tennessee. Devoted as it is to the interests of agriculture, every one interested in farming should take it. By an arrangement with the publishers, we are able to furnish it to subscribers of the **NEWS** for 50 cents a year.

THE CINCINNATI MEDICAL NEWS.

VOL. II.

CINCINNATI, FEBRUARY, 1873.

No. 2.

CLINICAL LECTURE ON UTERINE HYDATIDS.

By A. J. MILES, M. D., Professor of Diseases of Women and Children
in the Cincinnati College of Medicine and Surgery.

GENTLEMEN:—I present for your consideration to-day a very rare specimen of *uterine hydatids*, or what is sometimes termed *vesicular mole*. You see, as I suspend them, they resemble very much in size and shape an ordinary bunch of grapes; and you see, also, their attachment to a spongy substance presenting the appearance of degenerated placenta.

They are little cysts filled with serous fluid, and supposed to be developed out of the villi of the chorion prior to the end of the third month. The ovum, from some cause, undergoes degeneration, but sufficient vitality continues in the chorion to perpetuate growth, but, instead of normal growth, development is arrested, resulting in a dropsical swelling of the villi.

In order that you may have a more comprehensive idea of the nature of the chorion villi, I show you some beautiful specimens from six to eight weeks old, which you see have somewhat the resemblance of a fine sponge when wet, with its spore-like projections.

The chorion is the most external covering of the embryo, and forms one of its constituents from the earliest moments of fecundation. The office of the chorion is to supply nourishment to the ovum, and for this purpose there is a production over its cellular surface of velvety or villous prolongations, giving it a peculiar spongyoid or shaggy appearance. It is through these little villi fluids, furnished by the parent, are transmitted for the development of the embryo; and it is this villous structure

that becomes dropsical, from which the cysts in uterine hydatids are developed, and increase to the size of a grape or larger, and multiply to the number of hundreds.

As uterine hydatids are not of very frequent occurrence, I will give you a brief history of the case from which I obtained this specimen :

I was called Nov. 24th, 1872, to see Mrs. R., German, about thirty years old, the mother of four living children—never had an abortion. She was taken, two hours previous to my arrival, with severe labor pains, followed by profuse uterine hemorrhage, and the expulsion of two large clusters of uterine hydatids, each cluster as large as my two hands. The hemorrhage continued more or less until my arrival, the flow being caused by the presence of more hydatids. I at once introduced two fingers into the uterus and removed the cluster I have shown you, besides many others, single or in small bunches, that had become detached from this spongy structure—the degenerated chorion from which they are developed. After the uterus had been entirely cleared of its contents, ergot was administered, and cold water applied over the uterus to insure contraction and prevent further hemorrhage. After remaining until the uterus was well contracted and reaction fully established, I left her until the following morning, when I found that she had no return of hemorrhage, the uterus well contracted, the extremities warm, the pulse, though feeble, was gaining tone; but she had slept very little, and had irritation of the stomach with sour eructations.

On the morning of the third day, she seemed to be improving gradually, although she had taken very little nourishment and slept but little. There was no hemorrhage, no pain nor distention of abdomen or uterus; lochia normal. Late in the afternoon she had a severe chill, followed by prostration and death in a few hours. The excessive hemorrhage during the time of the expulsion of the hydatids was the cause of the prostration that resulted in death.

I learned from the history of this case that she supposed she was pregnant eight months, as it had been that long since she ceased to menstruate, and had the ordinary development and symptoms of pregnancy. I learned, also, that she had, during certain periods, uterine pain, followed by a discharge of water per vaginam; that the abdominal enlargement before the dis-

charge of the hydatids was as large, if not larger, than when she was previously pregnant at full term.

Gentleman, the great danger in uterine hydatids is from hemorrhage. The hemorrhage is always much more abundant than in ordinary childbirth; for in childbirth the hemorrhage proceeds from the utero-placental vessels, which occupy but a small portion of the uterine surface, whilst the entire inner portion of the uterus is more or less a bleeding surface in uterine hydatids.

The *diagnosis* of uterine hydatids is by no means easy, and may be mistaken for pregnancy, for polypus, for hydrometra, for cancer of the body of the uterus, etc. The question of pregnancy will be determined after the fourth and a half month by the stethoscope, the ballottement, and the active movements of the fœtus.

In polypus there is a bloody and mucous discharge, but no discharge of water, and the polypus can often be felt in the vagina or os tinæ.

If cancer exists, it would be recognized by the fetid discharge and constitutional symptoms.

In hydrometra, or dropsy of the womb, you would have fluctuation to distinguish it from hydatids.

In uterine hydatids there is a more rapid development, and consequent enlargement of the uterus and abdomen than in pregnancy. There is enlargement of the breasts, but an absence of the *true areola*, which you should remember is almost characteristic of pregnancy.

The one peculiar symptom of uterine hydatids is the periodical discharge of water per vaginam. The explanation of this discharge of water is not difficult. As these cysts develop they press upon the internal os, producing irritation of the neck of the uterus, which excites the organ to contraction, and the most dependent sacs are ruptured and their serous contents discharged through the vagina. As the sacs next in order become developed the same thing occurs again; hence it is that the discharge of water in uterine hydatids is periodical and not continuous.

You should bear in mind that uterine hydatids are always the result of conception.

Gentlemen, there is quite a distinction between uterine hydatids, or vesicular mole, and *true* hydatids, or uterine *acephalocysts*. *True* hydatids are very rarely met with in the uterus, there being only two authenticated cases on record. They differ very

materially from the former, in being closed sacs, one within another. The true hydatids are of parasitic origin.

According to Virchow, they are designated multilocular echinococcus tumors. The echinococcus embryo enter the lymphatics of the liver, and their sacs are developed there, almost always in the right lobe; and from this situation bursting into the cavity of the abdomen, and finding their way into the uterus, are there developed, and may become as large or larger than the size of a child's head. On microscopical examination of the contents of true hydatids, the characteristic membrane of the echinococcus can be recognized. Uterine hydatids require no special treatment more than their detachment and expulsion; this, however, is often attended with dangerous hemorrhage.

As soon as hydatids are discovered, if there is hemorrhage and the os dilated, the hand should be introduced and the tumors removed at once; if the os is not dilated, it should be accomplished by means of tents or Barnes' dilators sufficiently to admit the introduction of the hand, then detach the entire mass from the uterus and extract it. If, however, the hemorrhage be profuse, and the os not sufficiently dilated to justify the introduction of the hand, then resort to the administration of ergot, the application of ice to the neck of the uterus, or the injection of ice water into the rectum or against the mouth of the uterus. The application of ice or ice water generally has a magical effect in producing uterine contraction.

In the after treatment, the patient should be kept quiet, and your energies directed to the recuperation of the exhausted condition of the system by means of tonics and nutritious diet.

INVAGINATION OF BOWEL.

By J. L. CALDWELL, Beavertown, Pike Co. Ohio.

On the 8th of June, 1872, I was called to see a daughter of B. Adams, one of the commissioners of Pike County. Found patient ill, vomiting, complaining of colicky pains in the bowels which were constipated. Gave remedies which promptly arrested the vomiting, followed with a cathartic, and the patient,

who was about 12 years of age, seeming comfortable, I took my leave. On the following day the father came for me again, stating that the child had had no operation from the bowels yet, and that she was vomiting again. Found the case showing every symptom of inflammation of the bowels; patient lying on back with knees drawn up, countenance anxious, pulse small, wiry and resisting; a dry tongue; constant nausea and vomiting every few minutes; abdomen, swollen, tympanitic and exceedingly sensitive to the touch, while every now and then the patient would scream from what appeared to be spasms or cramps in the bowels. Administered the usual remedies for the vomiting without success. Applied a blister over the abdomen, and tried injections for the purpose of moving the bowels. It being about 2 o'clock P. M. when I arrived, I persisted in the treatment until night, when Dr. C. Blaser, of Waverly, was called in consultation. The Dr. not arriving until next morning, the treatment was continued through the night, everything that medical authority or experience could suggest, being tried without relief to patient. A dose of hydrarg. sub. mur. had been given on the 8th, followed by castor oil, but after that no cathartics were given, but injections were still used at intervals. On the arrival of Dr. Blaser, he examined the case, and at once pronounced it inflammation of the bowels, advised me to still use injections at intervals and continue treatment. Vomiting and other symptoms still continued, but the vomiting was at longer intervals. Gave morphia every few hours, fluid extract of senna, combined with oil of bitter almonds, in teaspoonful doses every three or four hours; used injection morning and evening. About the 11th or 12th the vomiting became stercoraceous, and exceedingly offensive; pains still continued and all the symptoms became more aggravated and alarming. This state of things continued until the 26th or 27th of June, when, upon my arrival in the morning, I was joyfully informed by the family and friends that "Frances had had an operation from the bowels." I found this to be the case, the bowels having moved freely, voiding a large quantity of fecal matter, same in appearance as she vomited up. She appeared a great deal easier, the symptoms all greatly improved, the vomiting not near so frequent or so free. She continued to convalesce to all appearances until the evening of the 29th, when the case suddenly assumed a low typhoid condition.

On the afternoon of the 30th, I being present while she was over the chamber, she voided a large portion of gangrenous bowel, and was laid back in the bed apparently almost lifeless. During the night and next morning large quantities of almost pure blood passed from the bowels. When I returned on Monday, July 1st, I found the patient to all appearances, moribund, the neighbor women for miles around, gathered in, (for the fame of the case had spread over the whole country.) I wished to administer a stimulant, but the women with one voice protested against it. "Oh Doctor" said they, "what is the use to torture the poor thing, by trying to give her anything, when it is of no use; let her die in peace." The mother was in poor health herself, looking hourly to be confined; and the father was worn out with incessant watching night and day. While I was arguing with a crowd of women in the yard trying to gain permission to adminisiter the stimulant, (for they had determined she should take nothing more, as she was dying,) the women in the house straightened out the patient, composed her limbs, took the pillow from under her head, and made every preparation for the soul of the patient to take its heavenward flight. At length the father said, "let Doctor give the medicine if he wishes, it can do no harm anyhow." When I entered the apartment, the patient was lying apparently lifeless, a cold, clammy sweat, such as we see on dying persons, having broken out over her face. With some difficulty I got a few teaspoonsful of brandy and water down her throat, but the patient still seemed to be in articulo mortis. It being then the middle of the afternoon, I took my leave, telling the family that if the patient was still alive in the morning to send for me, but that I did not think she would live more than a few hours, as she seemed to be dying every minute. On the morning of the 2d, I was sent for with the intelligence that the patient was still alive, and seemed a little better. On my arrival, I found the patient evidently better, but still not able to speak above a whisper; continued stimulants and former treatment. The patient convalesced slowly until the 8th, when medical treatment was discontinued. She still appeared weakly for about a month or so, but at present writing appears as hale and hearty as ever.

During the whole time the blistered surface of the bowels was kept raw, and hot fomentations were constantly applied. The

patient would call incessantly for "water, water!" which the stomach would almost instantly reject; ice was also given in small pellets.

The invaginated bowel, which I have in my possession, seems to be a portion of the small intestine engulfed within the ascend-colon; it is about 10 inches long, independent of the vermiform appendages, which are attached. Whenever the child was seized with those pains in the bowels, her screams would be heartrending. Mr. Adams had a sister, who died in Portsmouth, Ohio, with the same affection. The recovery of this child was considered miraculous by every one, even physicians pretended to be incredulous as to the bowel coming away, but a personal investigation satisfied the most skeptical.

CASE OF PROCIDENTIA UTERI, RESULTING IN THE DEATH OF THE PATIENT.

By HENRY A. BALDWIN, M. D.

I do not mention this so much for its extreme rarity, but as a precautionary case against the unskillful interference of the physician or midwife in certain conditions pertaining to the process of delivering the placenta, after the very rapid delivery of the child.

On the afternoon of Tuesday, November 30, 1871, I was urgently requested to see Mrs. C., twenty years of age, of well-developed physique, said to be suffering in difficult labor with her first child. On my arrival, I was informed that the child had been born nearly two hours before, the labor being a very rapid one, but that the placenta was retained, and "the string had gone up." Glancing at the patient I was surprised to see her blanched to a death-like pallor, pulseless, and apparently breathless, but closer inspection proved her breathing. Throwing back the heavy coverings that were over her, I found every thing completely saturated with blood, from the top to the bottom of the bed, running through a thick feather-bed and collected in pools on the floor beneath. A very large funis was lying outside, torn from the placenta with pieces of it attached. Instant interference was the indication, although she was not flooding at this moment—indeed, she was well-nigh bloodless. Introducing my hand

I encountered a placental presentation just engaging the inferior strait, and tracing it up to get above it that the one manipulation should be sufficient to break down any adhesions that might exist, I was surprised to find no resistance from or the presence of anything like the uterus, but rather an indefinable dome-like cavity, with the placenta nearly surrounding and attached to a large pedicle pendant from the fundus of the cavity, and movable in any direction. I decided to withdraw my hand, in order to give myself a minute's review of the situation, for I confess myself to have been utterly confounded. In withdrawing my hand, however, over the back or sacral face of this presenting mass, it passed over a portion that was evidently not placental. The pressure of the hand being partly the cause of the terrible tenesmus she was then suffering from, I did not stop long to explore it. My first impression was that it must be a uterine fibrous tumor that had been encompassed within the adhesions of the placenta during gestation, and that they were both descending together. But then, where and what of the uterus? As soon as practicable, was given $\frac{1}{2}$ oz. of the fluid extract of ergot, in a little spirits and water, and everything made ready for the ligation and extrication of the mass, should it prove to be an extra-uterine growth. Examining again, the tumor was found pressing hard upon the perineum, at the same time the poor woman seemed to throw her little remaining vitality into one constant and persistent tenesmus. Introducing a couple of fingers, and making the slightest traction, the whole mass was thrown violently without the vulva and low between the thighs.

My analysis of the protrusion was now plain as to its composition and condition. The uterus was completely inverted and pretty well contracted; the placenta firmly adherent and so drawn around it as to almost completely encase it, with the funis torn out, as before mentioned, presenting a large, torn, and ragged bleeding surface to the extent of at least four inches in circumference. Seeing the inevitable consequences of the case depicted in the patient's countenance, and being rather undecided in my course of action, I with some difficulty returned the mass entire to the pelvic cavity, feeling that she had not an ounce more of blood to lose, and that the proposed operation of peeling off the placenta and reducing the inversion would necessitate the loss of some blood, independent of the shock in such a procedure. Re-

turning the mass, however, was intended to be but for a little while, until the woman rallied somewhat, if possible—but I am persuaded that I should not again reduce a similar condition of parts to the pelvic cavity, under any circumstances, without first freeing the placenta and restoring the uterus to its proper condition and position.

The patient soon after this was evidently in articulo mortis, and she rapidly sank, dying about twenty-four hours after delivery.

In this case, we do not esteem the procidentia as the cause of death, but rather the hemorrhage.

The lesson to be learned from this case is plain and important. It is a well-acknowledged fact among surgeon accoucheurs, that the too sudden expulsion of the foetal mass at first term from the uterus deprives that organ of its ability to immediate contraction, and, as a rule, in surgical parlance, it is “shocked,” and remains for a longer or shorter time powerless and relaxed. In this case we have no doubt powerful traction was made upon the cord whilst the uterus was in this condition of positive “shock,” or *inertie de la matrice*, consequent upon a too rapid delivery.

Upon the occurrence of such cases in practice, the indication and its prompt fulfilment is unquestionably to free the uterus from the placenta and reduce the inversion.

USEFULNESS OF THE CLINICAL THERMOMETER.

[Compiled.]

In 1754, Antonius De Haen, the first teacher of clinical medicine in the Hospital of Vienna, impressed his pupils with the necessity of attending to the temperature of the body in disease, as measured by a thermometer, instead of being judged of merely by the hand. He showed that even in the cold stage of ague, with the teeth chattering and the body shivering, the temperature of the blood is rapidly rising, although the pallid skin may really be colder than usual—its supply of blood being diminished by the contraction of the bloodvessels.

When the hand of the physician alone is used to judge of the temperature of a patient, or when the feelings of the patient are alone taken as a measure of his temperature, it can easily be understood how such a kind of observation is extremely fallacious, doubtful, and unsatisfactory.

The practical application of the thermometer in place of the hand, while it is obviously a more accurate method, has never come into general use, mainly on account of the difficulty of getting instruments sufficiently sensitive and trustworthy—instruments, in fact, of sufficient precision.

When it is remembered that Galen's definition of fever is still the one whose accuracy remains not only unimpeachable, but fully demonstrated, and now recognized; that it describes fever to consist in "a preternatural heat,"—it is obviously absolutely essential that medical men should be able to measure this heat, and so learn the significance of such increase of temperature in every case of disease where fever may be present. The careful physician *counts the pulse and the respirations* in all cases of illness; it is now not less incumbent upon him *to measure the heat*.

For physicians, the thermometry of disease is practically important from two points of view, inasmuch as,—(1) *The continuous daily use of the thermometer facilitates the clinical recognition of disease*. It aids the busy practitioner in coming to certain and safe conclusions; and so relieves him of much anxiety of mind in doubtful cases. (2) The use of the thermometer tends to elucidate the Natural History of all diseases where fever is present.

The observations ought to be continuous daily, and regularly taken at the same hour every day, throughout the whole period of sickness. The most useful periods for observation are:—(1) Between 7 and 9 o'clock in the morning; (2) at noon; (3) between 5 and 7 o'clock in the evening; (4) at midnight.

In all observations of temperature, the pulse and the respirations should be noted at the same time.

In the less important cases, the physician may make at least one observation daily himself, and leave the others to the attendants if they are sufficiently intelligent. This arrangement, however, is only justifiable so long as the observations correspond with those typical of the particular disease, and so long as they are in harmony with the other general signs of its course; but as soon as notable deviations from these conditions are observed, the physician ought to make the observations for himself.

The best situation in which to place the thermometer is in the axilla. Some recommend under the tongue, but for obvious

reasons the cavity of the mouth is the worst place in which the thermometer can be put.

In cases which do not require the most rigorous and extreme accuracy, three to five minutes is found quite sufficient in private practice for the application of the thermometer. The simplest and most convenient way is to heat the instrument before inserting it into the patient's axilla.

With reference to the normal range of temperature, all agree that it varies in different parts of the human body; but as a general practical result, it is equally agreed that in temperate regions the normal temperature *at completely sheltered* parts of the surface of the human body amounts to 98.4 deg. F., or a few tenths more or less; and a rising above 99.5 deg., or a depression below 97.3 deg. F., are sure signs of *some kind* of disease, *if the increase or depression is persistent*.

Valentine proved by many experiments that all warm-blooded animals surrounded by an atmosphere of 50 deg. F. to 68 deg. F. have a temperature of about 99.5 deg. in the back of the mouth, the rectum, or other accessible internal parts; and at completely sheltered parts of the surface it is a degree lower—namely 98.4 or .5 deg.

The observations of Dr. Davy and of Edwards have shown that the amount of animal heat may be considerably altered by a number of collateral circumstances. But the great distinction between these alterations of temperature in health and those which are the result of disease, is, that these variations are generally temporary, and within narrow limits—amounting to mere fractions of a degree—rarely more than from 1.8 deg. F. to 3.6 deg. F., whereas those which are due to disease are persistent so long as the disease exists.

In ague, several hours previous to the paroxysm, the temperature of the trunk of the patient's body begins to rise; and when the disease seems to have disappeared, an increase of temperature may be detected periodically, unaccompanied by any other symptom. So long as this periodic rise of temperature continues, the patient is only apparently, but not really, cured.

In typhoid fever, during the exacerbations especially, the rise of temperature or its abnormal fall will indicate what is about to happen three or even four days before any change in the pulse, or other sign of mischief, has been observed. A sudden

and marked reduction of temperature has thus denoted hemorrhage from the sloughs of Peyer's patches in typhoid fever, several days before it appeared in the stools. A case of this kind is recorded by Dr. Parkes. It occurred in a female, 25 years of age. Diarrhea was considerable, and blood was largely passed in fluid stools the night before the 17th day of the fever. On the morning of that day, the temperature was as low as 93 deg. F., rising in the evening to 101 deg. F.

When the temperature is increased beyond 95.5 deg., it merely shows that the individual is ill, and suffering from some disease, and that when considerably raised, as with a temperature of 101 deg. to 105 deg., the febrile phenomena are severe; that when a great height is reached, as at temperatures above 105 deg. F., the patient is in imminent danger; and that with a rising temperature above 106 deg. F. to 108 deg. F., or to 109 deg. F., a fatal issue may almost without doubt be expected in a comparatively short time. The highest temperatures before death have been observed in cases of scarlet fever and of tetanus.

A person who yesterday was healthy, but exhibits this morning a temperature above 104 deg. F., is almost certainly the subject of an attack of ephemeral fever or of ague; and should the temperature rise up to or beyond 106.3 deg. F., the case will certainly turn out one of ague, or some other form of malarious fever.

Again, if a patient suffers from measles, and retains a high temperature after the eruption has faded, it may be concluded that some complicating disturbance is present.

In typhoid fever, a temperature which does not exceed on any evening 103.5 deg. F. indicates a probably mild course of the fever—and especially if the increase of temperature takes place moderately, towards the beginning of the second week. A temperature of 105 deg. F. in the evening, or of 104 deg. F. in the morning, shows that the attack is a severe one, and forebodes danger during the third week; on the other hand, a temperature of 101.7 deg. F. and below, in the morning, indicates a very mild attack, or the commencement of convalescence. In pneumonia, a temperature of 104 deg. and upwards indicates a severe attack. In acute rheumatism, a temperature of 104 deg. is always an alarming symptom, foreboding danger, or some complication such as pericardial inflammation. In a case of jaundice

otherwise mild, an increase of temperature indicates a pernicious turn. In a puerperal female, an increase of temperature indicates approaching pelvic inflammation. In tuberculosis, an increase of temperature shows that the disease is advancing, or that untoward complications are setting in.

In short, a fever temperature of 104 deg. to 105 deg. in any disease indicates that its progress is not checked, and that complications may still occur.

Certain febrile diseases have been found to have typical ranges or daily fluctuations of temperature throughout their course. In pure, unmixed, and uncomplicated cases this is found to be so constant that the differential diagnosis may be established by accurate observation of the temperature continuously from day to day. This has now been determined, especially in cases of malarious fever, typhus, typhoid fever, small-pox, scarlatina, measles, rheumatism, pyemia, pneumonia, and acute tuberculosis. In each of these diseases, the temperature is one of the most certain, although not the only, means for determining the real state of the patient as regards morbid disturbances or complications, and a careful observation of temperature from day to day is indispensable for judging as to prognosis.

When the temperature begins to fall from the evening to the morning, it is a sure sign of improvement; on the other hand, a rise of temperature from the evening till the morning is a sign of his getting worse.

It is of practical importance to know that the fall of temperature during the period of recovery, in cases of considerable morning remissions, as well as in those of continued defervescence, may be abnormally large, and sink as low as 95 deg. or even lower. Such events constitute collapse during defervescence, which must be counteracted by artificial heat, the administration of warm drinks, or of wine and camphor, so as to ward off some new danger.

During convalescence, the recurrence of a high temperature is generally the first sign of an approaching relapse, or the onset of a new disease, the characteristic symptoms of which it may precede by several days. The persistence of even an inconsiderable degree of abnormal temperature, after apparent return to health, is a certain, and frequently for a long time the only, sign of incomplete recovery, or the existence of some lingering

secondary disease. Thus the temperature should be closely watched during convalescence; and the thermometer should be applied every alternate evening at the very least. As long as the temperature remains normal, nothing need be feared; but every rise of temperature should act as a warning. It may be due to mere error in diet, or to leaving bed too early; but in such cases the temperature soon sinks again on greater precautions being taken.

The temperature may become more or less moderated, while the pulse is increased in frequency, and the other symptoms become more and more threatening. Such diminution of temperature, amidst conditions which do not harmonize with it, must be regarded as a pretty certain sign of approaching dissolution.

CLINICAL REMARKS ON A CASE OF RENAL INADEQUACY.

By ANDREW CLARK, M. D., Physician to the London Hospital.

GENTLEMAN:—I now recall your attention to the case of the patient whom we examined together, an hour ago, in Harrison ward. The man is 48 years of age, fair, well-built, moderately stout, and very intelligent. He is a cellarman, and has "lived well," but, as he adds, temperately. This is found to mean that he is a hearty eater of animal food, and that his daily consumption of alcohol averages about two quarts of beer, an occasional "drop" of brandy in water, and three or four glasses of any sort of wine. But he has never been "the worse for liquor;" and until eight years ago, although taking little exercise, and following his occupation almost entirely underground, he enjoyed uninterrupted health. Even now, an ordinary look at the man returns no impression of serious illness. It is only the close scrutiny of an experienced eye which detects in the patchy red and yellow of his face, in his pinched features, in his careworn expression, in his tremulous, excitable manner, and in his movements shorn of the freedom characteristic of health, the signs of an organism somehow ill at ease.

The patient's family history is exceptionally good. The father died at 70; the mother lives in tolerable health; two brothers and a sister are alive and well.

Eight years ago our patient, after a hearty supper, awoke in the middle of the night with an odd sort of nervous attack, suffering from palpitation, shortness of breath, cold sweats, trembling, and an agonizing sensation of impending death. A stiff dose of brandy-and-water subdued the urgency of his distress,

and in a couple of days he was at work again. But from then until now he has never been well; and yet he is unable to say exactly how he has been ill.

The burden of the man's present complaint is to this effect:—He says that he is losing strength; that he is nervous, irritable, and often "queer in the head;" that he has sometimes numbness, or tingling, or pains now in his arms and then in his legs; that he wakes in the early morning depressed and agonized; that although he has a good appetite his food does not strengthen him; that he is not able for his work; and that when he persists in working he flushes all over, and feels as if he would be faint or sick. He adds, with remarkable significance, that he is always better in the hospital, where twice before he has been a patient; and he ascribes his betterness to rest from work, in spite of what he considers the insufficient diet to which he is confined.

Such is the sum of the patient's complaints. Let us now endeavor to discover the cause of them. Our first thoughts suggest that it will be found in the nervous system, and we will seek it there. Head feelings, numbness and tingling in the extremities, occasional incertitude of movement, incapacity for sustained attention, and morning despondency make together an array of symptoms which seem to betoken either the approach or the existence of serious disease of some part of the nervous centres. But I am by no means sure—nay, in this case I doubt that they do. For observe, in the first place, that these symptoms have existed in greater or less degree for years; that they come and go, that they flit from place to place, that they are scarcely a whit worse now than they were at first, and that for all the gravity of their threatenings nothing serious has actually come of them. Observe, in the second place, that the symptoms under discussion are all, or at least nearly all, subjective. By none of the many means of investigation at our command can we discover and demonstrate any reliable objective evidence of disease within the regions of intelligence, sensation, and motion. And, lastly, let me say—and I say it confidently—that there is nothing in these nervous symptoms, regarded collectively as well as separately, to necessitate the conclusion that they are due to any primitive affection, either organic or functional, of the nervous system. On more than one occasion I have been enabled to furnish some of you with proofs, as conclusive as the subject will admit of, that disorders akin to those complained of by our patient may arise from pathological conditions in other parts of the organism. And in this case, unless I cannot find elsewhere a sufficient cause for the nerve symptoms, I shall certainly not return to seek for it in any independent affection of the nervous system.

Turn we now to the digestive system, and see what we can find there. The tongue is clean; the appetite is good; there is

no discomfort after meals. Beyond a habitually acid saliva, some pain in the left side plainly due to colonic distention, obstinate constipation, and a singularly scanty separation of fæces, there are no other evidences of disease in this part of the body. Here let me remark that the patient has a rooted prejudice against aperients. He says that they make his head bad; that they aggravate all his symptoms, and that they make him low and uncomfortable: wherefore he has been in the habit of leaving Nature to herself, and of going for days together without relief, which, when it comes, is dark, scanty, pellety, and dry. Infrequent relief of the bowels, and a slender discharge of fæces when it comes, may seem matters of small moment and to count for nothing in the explanation of the patient's case; but it is, in fact, quite otherwise. Next to a just supply of proper food and air there is no more essential condition of health than a free separation and discharge from the body of its waste products. The retention in the blood and tissues of what ought to be separated from them, and the absorption of what ought to be cast out, are fertile sources of disease. Without a wide and free excretion, our pabulum becomes our poison, and anemia, nervousness, embolia, gout, rheumatism, and tissue degenerations are occasionally the manifest expressions of its baleful influence.

Now, I am not about to contend that this long detention of fæces in the body is a frequent cause of serious disorder; but I do contend that it is an occasional one, and that it counts for something in the explanation of cases of anomalous ill-health in which the excretory functions generally are at fault. Only last session I called your attention to two cases of what I called "fæcal poisoning"—cases in which anemia and a long array of nervous disorders were demonstrably due to a lengthened detention of fæces in the bowels. I do not doubt that many cases could be brought forward in which habitual and lengthened constipation is found to be compatible with excellent health; neither do I doubt that many persons are to be found who for successive years consume daily over a bottle of strong wine without manifest disorder. But such cases are strictly exceptional, and, while worthy of record in illustration of what some organisms will tolerate, they are certainly not to be held up for general example.

Returning from this digression to our patient, I am disposed to say that this fæcal retention and the consequent absorption of fæcal matters into the blood is one of the conditions which together have brought about his present illness. And I think the man's statement that he is made worse by aperients no refutation of this opinion. He has been *peddling with purgatives*, and in cases like his you will often find that while small doses excite insufferable teasing and return no benefit, liberal doses of well-selected drugs act with ease and are followed by relief.

Let us inquire next into the condition of the kidney, in so far as it can be ascertained through an examination of the urine. Sundry things in the patient's history, habits, and present condition point to this organ as a probable cause of his symptoms. Viewed together and in their manner of appearance they closely resemble those which herald the approach of granular degeneration. But still, although they justify a grave suspicion, they warrant no conclusion. What does the urine tell us? Not from one examination, but from several examinations carefully repeated, I have learned several things which seem to have an obvious bearing on the case, and this is the sum of them:—The quantity of urine passed in the twenty-four hours is rather below than above the average. It is of a pale sherry color, clear, acid, and has a variable density, which, however, at no time exceeds 1012. Occasionally it deposits, after some hours' rest, a few crystals of uric acid, together with a mucous cloud of normal appearance and size. There is not a trace of albumen, and the most careful examination of the sediment fails to reveal the presence of tube-casts, or of anything but a very small quantity of granular *debris*, with now and then a few crystals of uric acid and of oxalate of lime. Of the saline constituents, and of the extractives, I have kept no precise record; but the quantity of each is considerably below the average of health. The quantity of urea excreted in the twenty-four hours is about 280 grains, and this is an amount which, considering the weight of the patient and the quantity and quality of his food, cannot be called otherwise than flagrantly deficient. Through this constitution of the urinae, we clearly discern an indolent and inefficient kidney. There is defective renal excretion, and unless the matters which constitute it escape by other channels they must accumulate in the blood and in the tissues, where they will hinder oxidation, pervert nutrition, and worry the brain. Here, then, arises this question—Is not renal inadequacy (as I have sometime called it) partly or wholly the cause of our patient's symptoms? But before replying to this question let us continue our progress through the organism, with the intention of discovering if there be present any other pathological conditions requiring a modification of the answer which seems ready to be made.

The heart is small in size and quick in action. It beats in the usual place. There is no murmur, unless one should dignify with that name a slight systolic puff heard at the lower end of the sternum. The pulse at the wrist is feeble, and, averaging about eighty beats in a minute, varies with the slightest movements of the patient. The microscopic characters of the blood are healthy; tried by Garrod's test it contains no appreciable amount of uric acid.

The lungs are sound.

The skin is dry, furfuraceous, and devoid of the unctuousity of

health. When nervous, the hands and feet become bathed in a watery sweat.

The muscles are soft and flabby. Occasionally the patient suffers from cramps in the calves of the legs; and in other parts from wandering pains which he calls rheumatic.

These, then, are all the evidences of disease which we can discover in our patient, and out of them we have to extract, if we can, the explanation of his malady. What is it? Shall we be content to repeat what has already been said of the patient—that he is a mere hypochondriac? Certainly not. Hypochondriasis is nothing better than an ignorance-bag into which men toss the cases of which they are unable to discover any rational explanation. But of this case I think we need make no confession of such incompetency, for I affirm that the grounds of an adequate interpretation of it are both obvious and nigh at hand.

Or shall we adopt the other opinion of the case, which has been given in harmony with the fatalistic fashion of the time? Shall we say that the patient was born to be thus ill, that his illness is part and parcel of his normal development, that it is the outcome of evils transmitted from his progenitors, and that you can no more hope to alter it than you could hope to alter the contour of his features or the color of his skin? Well, I will not say either that this explanation is inexplicable, or that there is nothing in it; for it cannot be doubted that there are many kinds of cases which necessitate some such explanation, although it may well be doubted that there are many which justify the conclusion drawn from it. I shall have to speak to you at length of this subject upon another occasion; meanwhile I contend that this second view of the case is unsupported by a single reliable fact in its history, and I hold that, as the symptoms present can be accounted for by existing facts, and appear to have arisen out of adequate conditions, the explanation offered is both beside the mark and superfluous.

But if I reject both these explanations, what other explanation, you may ask, have I to offer? Well, I have another, and this is it:—Remember that the three main points in the patient's case are constipated bowels, an inactive skin, and an inefficient kidney. The first two conditions doubtless count for something in the explanation of the case, but I hold strongly that the last condition counts for most. I ascribe the man's symptoms to defective renal excretion; and for the convenience of having a name, I call his malady "renal inadequacy."

Let me now endeavor to set before you the reasons which have carried me to this conclusion.

In the first place, it is demonstrable that there is a grave deficiency in the renal excretions of our patient. Certain products of waste, which ought to leave the organism through the kidney,

do not leave it through this channel; and, as we have seen that they do not leave it through the complementary channels, which are notably inactive, they must be retained in greater or in less amount in the blood and in the tissues. Theoretically, we are prepared to expect that the retention of waste matters in the system should occasion disorders, and ultimately even diseases, of the organism; and the expectation has been fully justified both by empirical observation and by direct experiment.

In the second place, clinical inquiries have proved, beyond the possibility of doubt, that different kinds of disorders are occasioned by the detention in the blood of different kinds of excrementitious matters. For example, the accumulation of uric acid or of its congeners in the blood causes one set of disorders, and the accumulation of urea or of its congeners causes quite another. And although, even now, I could add some half-dozen illustrations to these, I have no manner of doubt that when organic chemistry becomes more precise in its aims, and more aggressive in its character, they may be added to without limit.

In the third place, a careful scrutiny of our patient's condition, as it is modified by varying changes in the organism, and by varying agencies acting upon it from without, brings to light direct and conclusive proof of the causative relation which I have assumed to exist between the symptoms complained of and the renal inadequacy. Take, for example, these two facts: When the urine falls in density without increasing in quantity, the patient's disorders are aggravated; when the supplies of food, and especially of alcohol, are increased—when the patient eats and drinks as freely as he desires,—his sufferings, after a few days, become, as he says, without suspecting the cause, almost unendurable, while the density of his urine, however scanty, will not rise above 1012.

For these reasons, then, as well as for others which I have already mentioned to you informally at the bedside, I set down this case as one of renal inadequacy. And now, before proceeding to discuss the future of our patient and the principles which should regulate our treatment of him, I desire to make a few general observations upon this condition of kidney which I have called "renal inadequacy;" but having already encroached upon the time allotted for this lecture, I must postpone what I have to say until our next meeting.—*Med. Times and Gazette.*

ON SICK-HEADACHE.

By P. W. LATHAM, M. D., F. R. C. P.

In an article on Migraine, in the November number of the *Practitioner*, Dr. Anstie "desires to make at once the claim of independent observation," as "more than one authority has lately

put forward, as if it were a novelty, the doctrine, that sick-headache, is essentially a neurosis." He adds that, for several years back, he has recognized "the nervous origin of sick headache," and that it "is certainly a neuralgia, in the majority of cases, affecting the first division of the fifth."

I wish to make one or two remarks on these quotations, having lately put forward in this *Journal* (March 23 and 30, 1872) certain views respecting the pathology and treatment of this disorder, based on the supposition that it was a nervous disorder, but, in my opinion, certainly not what is usually termed a neuralgia.

Every one, I am sure, will concede to Dr. Anstie his "claim to independent observation;" but, in so doing, it must be allowed that he has been somewhat remiss in his historical research. The idea that migraine is a neuralgia, originated, not, within the last ten years, but nearly a century ago, when Tissot in his *Traité des Nerfs et de leurs Maladies* (Paris, 1783, t. iii, part ii, p. 121) localized the malady in the same part as Dr. Anstie now does—in the first division of the fifth nerve. Dr. Anstie's meaning may perhaps be, that he is the first to *prove* that the disorder is certainly a neuralgia; this, I am inclined to think, has still to be accomplished. Lebert (*Handbuch der Praktischen Medicin. Vierte Aufl.* Tubingen. B. ii. s. 672); although he defines migraine as "a painful neuralgia probably in the ramus ophthalmicus," yet, when discussing the diagnosis of neuralgia of the trigeminus says, "Migraine has a great resemblance to neuralgia of the ramus ophthalmicus, and may really be so; but the former causes much greater disturbance of the sensorium, it spreads much more generally over the head, and is not unfrequently accompanied with nausea and vomiting; after the attack there may be an intermission for weeks or months, and the attack itself runs a more uniform or continuous course" (*loc. cit.*, s. 699). These symptoms are not incompatible, however, with the disorder being, as I described it, an affection of the sympathetic ganglia. The theory which I advanced in my lecture (*loc. cit.*, p. 306) was this: if by fatigue, anxiety, or other depressing cause, the general tone of the body be lowered, and with it the regulating power of the cerebro-spinal over the sympathetic system impaired, then excitement of one or more portions of the latter takes place, causing contraction of the blood-vessels under the influence of the affected portions; this excitement is followed by exhaustion or paralysis of the sympathetic, and is associated (just as it would be after section of the nerve) with dilatation of the vessels, and—if the cervical portion of the sympathetic were affected—with headache. When this lecture was written, I was unaware that any author had previously given such a marked prominence to the sympathetic in the production of the series of symptoms. I have since seen

two very important papers, though containing views diametrically opposed to each other, one published in 1860, by Du Bois Reymond (*Archiv. für Anatom. Physiol. u. Wissensch. Medicin.* 1860. S. 461), the other, in 1867, by Dr. Mollendorff (*Virchow's Archiv.* B. xli. s. 385). I can, therefore, lay no claim to novelty regarding migraine as an affection of the sympathetic. Dr. Edward Liveing, whose paper in the *British Medical Journal* (April 6, 1872) leads one to look with impatient hope for the early publication of his forthcoming work, though not denying "that disorders of local circulation occur in the course of meg-
rim, and that the implication of the sympathetic may play an important part in their production, yet regards them among the least constant and regular of the phenomena, and certainly not as essential and as the cause of the rest." Dr. Liveing regards the phenomena as those of a "nerve-storm traversing more or less of the sensory tract from the optic thalami to the ganglia of the vagus, or else radiating in the same tract from a focus in the neighborhood of the quadrigeminal bodies." These views, I trust, we shall soon be able to discuss, when Dr. Liveing's treatise is published. He refers, however, in his paper, to Du Bois Reymond's views, but only to dissent from them; and herein I agree with Dr. Liveing. Du Bois Reymond assumes that migraine is a "tetanic condition of the muscular fibres of the arteries in the affected side of the head, or a tetanus of the crevical portion of the sympathetic nerve of that side" (*loc. cit.* p. 464): that, during the headache, the arteries are in this tetanised condition, the pupil of the affected side dilated, and the temporal artery like a hard cord. Dr. Liveing says, "I carefully compared the temporal arteries in a well-marked hemicranial paroxysm, but could discover no such increased rigidity of the one on the painful side as Du Bois Reymond describes." Du Bois Reymond himself saw a difficulty about his hypothesis, for he says, p. 465. "One symptom among those presented above, and which is never wanting in the description of migraine, certainly does not accord with our theory; namely, the reddening of the conjunctiva, which occurs during the attack. The reason of this, probably, may be, that the muscular fibres of the vessels of the conjunctiva are either relaxed earlier, or began to contract sooner than those of the other affected vessels." The tetanic state has, in fact, passed away with the commencement of the headache; the beat of the temporal artery, instead of being hard, is soft and full, its walls have lost their tonicity and are yielding, and this condition is also shown by the reddening of the conjunctiva.

That the stage of headache is accompanied by a fulness of the vessels, is shown very strikingly by Mollendorff's investigation. Had I seen this author's paper before my own was published, I should merely have brought forward my examples in support of his views, but, at the same time, I should have insisted more strongly

than he does on the antecedent contraction of the arteries, and especially its relation to the disturbance of vision which, in many cases, precedes the headache. Mollendorff says (*loc. cit.*, p. 387), "If, during an attack of hemicrania, sufficient pressure be exerted on the common carotid of the painful side near the thyroid cartilage, as almost to stop pulsation in the temporal artery, the headache ceases as if by a charm, the eyes are joyfully opened, and the depressed and painful expression passes off. But, on discontinuing the pressure, the pain unfortunately returns with the first wave of the pulse. The first pulsations are, in fact, more painful than before; since, owing to the defective tonicity of the vessel, the fresh rush of blood causes greater vibration of its walls; the throbbing, however, soon becomes more uniform.

"If, on the other hand, before the pain has reached its climax, the carotid artery of the opposite side or the subclavian artery of the same side be compressed, the pain is then increased. The blood-stream in one direction being thus cut off, a greater volume of blood is driven towards the relaxed carotid, and, owing to the paralysed muscular tonicity, admitted into it. If, however, the pain has reached its climax, then compression of the carotid artery of the unaffected side alleviates somewhat the headache, by allowing a more rapid lateral flow of blood to the unaffected side, and so relieving the painful side. This experiment has been invariably successful with every person that I have had an opportunity of seeing, during an attack of hemicrania.

"That there is an increased arterial flow of blood, resulting from the enlargement of the vessels, is also strikingly shown by the ophthalmoscope. It is, however, difficult to prevail upon the patients, during the attack, to submit to this very painful investigation. I can, therefore, only furnish the following result of repeated observation on the same individual:

"The eyes were quite normal and darkly pigmented. During the intervals between the attacks no difference was observed in the two eyes on examining them with the ophthalmoscope. The fundus appeared dark brownish-red; the optic papilla, normal; the arteria and vena centralis retinæ in each eye equal. During the attacks, the fundus of the affected eye was bright scarlet red; the optic papilla, reddened and swollen; the arteria and vena centralis retinæ, broader—the latter nodulated and very tortuous, and of much darker color than usual. The other eye had its dark brownish-red background, and its arteria and vena centralis as usual. The arterial fluxion is consequently manifest, both by the direct dilatation of the central vessels, as well as more particularly by the change in the color of the choroid; the dilated bright red arteries concealing the pigment, and the fundus, instead of having a dark red-brown color, appears of a scarlet color. The thick, nodulated, tortuous vena centralis

retinæ, at the the same time, indicates that there is an impediment to the return of blood to the brain. Considerable injection of the conjunctival vessels is often observed extending to the circumference of the cornea. This, however, disappears as the attack passes off. The most distinct ophthalmoscopic appearances are seen in the most severe attacks."

Dr. Mollendorff also refers to the very copious secretion of limpid urine which takes place during the headache, and to the secretion of sticky unpalatable saliva; the former corresponding with what results after section of the splanchnic nerves, and the latter after section of the nerves belonging to the glands.

In my previous paper, I remarked that some of the symptoms seemed to indicate a relationship, though fortunately a distant one, between this disorder and epilepsy. The recent communication of M. Brown-Sequard to the Societe de Biologie has an important bearing on this point. Some years ago M. Brown-Sequard discovered that epilepsy could be developed in the guinea-pig in three or four weeks after section of the sciatic nerve near its origin, or, still more certainly, by forcible ablation of the nerve, and that then, by gently irritating a certain zone in the temporal region, fits could at any time be produced. But he found that section of the spinal cord immediately above the origin of the sciatic nerve does not give rise to epilepsy; and this lead him to suspect that the symptoms were due, not to section of the fibres of the sciatic nerve proper, but to section of fibres of the sympathetic united to the sciatic after its emergence from the spinal cord. "Division of the great sympathetic in the abdomen produces only transient effects—incipient symptoms, as it were, of epileptic attacks, but nothing positive or definite. On the other hand, section of the roots of the last dorsal and first lumbar nerves produce epileptic attacks, and it is known that these roots produce sympathetic filaments to the sciatic nerves. From all this M. Brown-Sequard concludes that it is to the section of the sympathetic that we must essentially attribute the artificial production of epilepsy." (*Lancet*, Oct. 5, 1872, p. 502.)

Would not these experiments of M. Brown-Sequard rather show that a series of morbid phenomena originating in section of the sympathetic alone might develop such symptoms as are associated with migraine? but, that for the production of epilepsy, there must be a series of morbid phenomena both in the systematic *and* in the cerebro-spinal system—structures must be operated upon containing the two kinds of fibres; and possibly this is the reason why, though the two disorders may be essentially different and distinct from each other, they have some symptoms in common.

METHOD OF DETECTING POISON IN HAIR DYES AND HAIR RESTORATIVES.

By HAYDON M. BAKER, CHEMIST.

There are many preparations in the market bearing the names of Hair Invigorators or Restoratives, and the proprietors of these preparations, in order to secure a ready sale for them, assert, not only that the article of their manufacture will restore the hair to its original abundance and color, but also that it is perfectly harmless, being entirely *vegetable* in its composition.

Many persons have applied to the writer for an analysis of certain preparations for the hair, which are favorites with them, they say, because the effect of their application is so gratifying, being free from all injurious matter; some of them desiring the formula to engage in the manufacture of so innocuous a preparation.

In all the samples of different preparations for the hair that I have examined, with the exception of one French preparation, I have found Sugar of Lead, Lac-Sulphur and Rose-Water to be the principal ingredients. As such preparations, from frequent application, would result in paralysis, or in a class of disorders similar in character to sun-stroke, I will describe a method by which any person may determine the presence of lead in any preparation he may select.

When the direction is given on the bottle of any one of these preparations, to "shake well before using," and the contents show a yellowish white precipitate with a clear solution above, it may reasonably be inferred that the preparation consists of Acetate of Lead, Water, Sulphur and Essential Oils. To prove this assumption, allow the bottle to remain quiet until the insoluble precipitate has subsided and the liquid portion remains clear; next pour off carefully a good portion of the solution into another bottle, taking care not to disturb the precipitate. Into this new bottle fit a cork with a piece of zinc inserted, observing that the zinc is long enough to reach the liquid, but not so long as to touch the bottom of the bottle. Then place the bottle where it will not be disturbed for an hour or so, in an ordinary temperature or above 32 degrees. At or before an hour has elapsed, if *lead* be present the lower extremity of the zinc will be covered with bluish-black shining scales, which will extend to the bottom of the bottle, presenting the appearance of an inverted tree. It is, however, necessary to confirm this decision, as other metals besides lead are precipitated from acid salts, in solution, by metallic zinc. The best way for a person unskilled in chemical reactions to do this is to remove the cork and zinc from the bottle, with as little agitation as possible, so that the precipitated metal may not be-

come detached from the zinc. After the removal, scrape off the metallic scales on a piece of white paper; when quite dry draw a portion of the scales over the paper, under the pressure of any convenient instrument, such as a piece of ivory, glass or wood; observe if it leaves a mark similar to that made by a lead pencil, if so one may decide with safety that the *Hair Restorative* contains a lead salt. In the original bottle which contains the preparation under examination, will be found the precipitate supposed to be sulphur. To prove that it is that element, strain off the supernatant liquid through a cloth; after drying the precipitate, place a portion on some warm surface, when it fuses or melts hold over it a lighted taper, if it be sulphur it will burn with a mixed green and purple flame, and emit sulphurous acid, exhibiting an odor similar to that of a lighted lucifer-match.

Of course, chemists resort to many other methods than those described, to convince themselves of the presence of lead in any of these preparations, but this article is designed only for the guidance of those unfamiliar with chemical affinities and relations.

The proprietors of many of these Hair Preparations are extremely averse to having chemists announce to the public the analysis of their productions, and in some cases resort to extreme measures to prevent such an exhibition.

Very much more could be written, detailing the effects of such preparations, when applied for the purpose for which they are issued, and much also could be written upon the character, physiological and chemical relations of the hair, but we will discuss that portion of the subject upon some future occasion.

ELIXIRS.

By C. G. POLK, M. D.

Within the last six or eight years a class of pharmaceutical products, termed elixirs, have acquired extensive use and grown into an undeserved popularity, both with physicians and the community at large. But while purporting to be definite solutions of officinal and well esteemed remedies, they are as varying in their constituents as the proprietary bitters, and of really less value than some of them. In appearance, articles bearing the same name vary in hue from an inky blackness to the color of officinal syrup, with almost every intermediate tint. Their taste is as different as their color, but in therapeutical value they generally agree; most of them being utterly worthless.

The whole thing is radically wrong and strikes at the very foundation of rational pharmacy. In the first place the articles are so numerous that they must modify the action of the principal article to a degree that envelopes the therapeutical result in

mystery, and leads the physician to grope in darkness and uncertainty to an extent as great as if he were using Scheitz's or Hostetter's Bitters. Secondly, it is morally wrong to tamper with human health and rob the sick of their money without an equivalent benefit. Thirdly, they are the creations of private formulas, many of which are unknown to anyone else than to the manufacturer, and are practically proprietary medicines. Fourthly, they are a flag of truce to homœopathy initiatory to a surrender, without half the therapeutic merit of aconite, belladonna, pulsatilla, bryonia and veratrum, even homœopathically administered. Fifthly, they are not what they profess to be. They are base frauds. Most of the elixirs of calisaya are nothing more than a finely flavored solution of sulphate of cinchonia in proportion of about half a grain to the ounce, and do not contain the least trace of any other alkaloid of the cinchonia bark. The ferrated elixirs generally contain the stated amount of the citrated iron in which their virtues mainly consists, but even these have no advantage over a syrup of the citrate of iron properly flavored, and are often not as good.

The tinctura cinchonæ comp., well prepared, with fresh orange peel and combined with compound tincture of cardamom and syrup to meet each individual case, is preferable to any elixir I have ever seen for general use. If iron and quinia are desired, the citrate of the two in combination may be given in pillular form, or in a finely flavored syrup combination.

Bromide of potassium may be administered with compound tincture of cardamom, which nearly conceals its disagreeable taste, and the iodide of potassium given in syrup, compound tincture of cardamom and Curacoa cordial can be taken without difficulty. The bitter taste of quinia may also be nicely concealed by a similar combination, so that a grain may be administered in dessert-spoonful doses. *An elixir of copaiba containing half a drachm in half an ounce of the menstruum, and so covered with aromatics as to be palatable, would be really a pharmaceutical triumph!* but one which has not yet been gained.

The evils of the elixirs are recognized, deplored and condemned by the better class of physicians and pharmacists, and yet the remedy is plain. Make them officinal, strip them of their novelty, and adopt formulas that every retail druggist can follow. Uniformity of strength, taste and appearance would be established; only one bottle of each would be required; physicians prescriptions could always (when they are ordered), be filled in letter and spirit, and all the mist and uncertainty which now envelop elixirs would be cleared away, and a class of remedies well suited for infant therapeutics would be at least definite in their constituents, convenient for physicians and druggists, easy to administer and reliable in their action. Those miserable go-betweens of homœopathy on the one hand and quack reme-

dies on the other would either cease to exist or become patent medicines sold by printer's ink.

It has been suggested by several pharmacists that there be a simple elixir, to be used as a menstruum, wherever it is necessary to cover the taste of disagreeable medicines. Although several objections can be urged against any formula I could offer, either of my own emanation or have seen offered by others, I doubt not that pharmaceutical skill can supply this great desideratum.

But however much I may condemn the wholesale quackery into which the elixirs have been run, I do not wish to be understood as condemning them in toto. Valerianate of ammonia is so disagreeable in odor and taste as to be neglected for these, unless they be covered, and the formula in the United States Dispensatory does this sufficiently well to render it available; and could assafoetida also be covered in taste and smell without interference with its therapeutical action, one of our best nervines and anti-spasmodics would come into general use.

I hope that this subject will receive the consideration of more able and experienced minds, and a great evil be remedied.—*Jour. of Pharmacy.*

THE BEST, THE MOST SIMPLE AND UNERRING TESTS FOR OBJECTIVES.

Read December 27th, 1872, by WILLIAM WEBB.

[Reprinted from JOURNAL OF QUEKETT MICROSCOPICAL CLUB.]

In submitting this paper for your consideration, I pray that so much of the verbiage as *prima facie* may appear to be egotistical or presumptive may be treated with kindness, and not allowed to prejudice your minds until the whole paper has been read, discussed, and calmly considered. A double apprenticeship to the study and practice of the subject enables me to speak in terms so confident and positive that I fear to give offence, even in the initiatory title, viz.:—"The best, the most simple and unerring tests for objectives."

Apologizing, in this company, for saying what is required of a Test is Definition, Flatness of Field, and Distortion.

In speaking of definition in most instances I have adopted square measure, but where practicable I have expressed my words in lineal measure.

To view distinctly the five thousand millionth of an inch is good definition. To view the same space with equal distinctness all over the field is flatness of field. To view an object, and to find it presenting an abnormal state, is distortion.

I now propose to treat the Definition and Flatness of field together, and to submit that there is no test so certain as a series of engravings on glass. For my purpose I engrave a series of

plates with letters measuring from one two hundred thousandths of an inch to one two hundred millionths of an inch. Each engraving is of the Lord's Prayer, varying only in size, commencing about the thousandth of an inch, which is at the rate of over a quarter of a million letters to the inch, and progressively decreasing the size, the next of the series being at the rate of a million letters to the inch, the next two millions, the next three, and the next four million letters to the inch. Having reached this point, and finding the Old and New Testament together consist of three million 566 thousand 480 letters (for the convenience of a stand-point), I say the lastly enumerated test is at the rate of one Bible to the inch, and then engrave the next at the rate of another Bible to the inch, and go on decreasing at the rate of a Bible to the inch down to fifteen Bibles, or, at the rate of fifty-three million four hundred and ninety-seven thousand two hundred letters to the inch; but when it is remembered that the letters are written within two parallel lines, with space above and below for long letters, and to enable one line to be distinguishable from another, I most respectfully submit that, such letters as "a," "e," "o," and "u," although averaged, with all other letters, with the capitals, and including spaces, at the 53,497,200th of an inch, being actually written within the lines, after allowing for the extra space occupied by capitals, the spaces between words, and the space between one line of writing and the next line, it may be taken that the "e" actually occupies only one-fourth of the average, or, the two hundred and thirteen million nine hundred and eighty-eight thousand eight hundredth of an inch.

The measurement does not stop at this point, as there are other steps to be traversed—one, as to the dot to an "i," I say nothing now. As to the "e," it is self-evident that it is not a spot of black of the previously estimated less than 200 millionth of an inch, but composed of a bent and twisted line across, and about the 200 millionth of an inch; therefore, the thickness of the line has to be considered, and, taking that at a lineal fifth of the space, the 200 and odd millionth would have to be multiplied by 25 as the square of 5, which would bring the square of the line down to the five thousand three hundred and forty nine million seven hundred and twenty thousandth of an inch—and do not stop there, for that five thousand millionth is itself loaded in, and consists of abraded black atoms, grated in by the cutting edge of the glass letter, which atoms can be seen in different aggregations where the line has not been perfectly filled in, and if at the rate of two atoms of black in the square of the line, the five thousand millionth becomes the ten thousand millionth; if at the rate of twenty atoms of black, the size of the atom is the one hundred thousand millionth of an inch.

I now come to the most important and, to my mind, the most

interesting part of the subject which deals with the tests unblackened. For this purpose I must go back to the square of the line forming the letter as the 5,349,720,000th of an inch that, reduced to its square root, gives 73,000 + of an inch linear as the breadth of the line.

I mount the same series of slides in the way that Monsieur Nobert mounts his justly celebrated tests—without black—and thus open up a wonderful means of study of the whole subject, helping to afford the power of determining at what breadth unblackened lines become invisible, even when aided by the microscopes of the present day. In this instance the 73,000th is an absolute line, unbroken by a next line.

When viewing the black lines, ordinary direct illumination is sufficient, but when examining the unblackened lines it becomes necessary to adopt in its turn every available means of illumination, because the cut, being wedge-shaped, each side of the cut, from every part to its very apex, both refracts and reflects again and again the light from the other. Again, the original upper and lower surfaces of the glass refract and reflect the light backwards and forwards; again, the top light flows into the cut, helping to produce the climax which blazes away the cut as the light of the sun overpowers or destroys the light of a candle.

By testing by blackened and by plain unblackened letters, it will be found at what point the power of certain objectives ceases to be effective with transparent objects. I can define the smallest Lord's Prayer when blackened, that is, I can define a line of the 73,000th of an inch, but have never been able to define the same test unblackened. More than that, although I know the exact spot that it occupies, and mark the spot with an Indian ink ring before it leaves the machine in which it is engraved, I have never (perhaps because of irritable temperament) been able to discover, not merely the line, but the aggregation of lines forming the 227 letters of the very small tests, although they become perfectly distinct when black.

If I shall be honored by a full and exhaustive discussion of this paper, I may be delighted to submit to the Club another paper upon the clever productions of M. Nobert, in the hope that I may be able in some way to assist others who may not so fully have studied his wonderful works, in arriving at a just appreciation of M. Nobert's extraordinary, patient, and persevering skill.

It is not necessary to possess more than a short selection of my tests to include general purposes, and in some particular cases a single test will be sufficient.

I now pass to the remaining part of the subject, viz., Distortion, which I believe is not so well understood, simple as it is. For this test I rule a piece of glass with fine black lines, and place it upon the stage; I then rule a disc with black lines and drop it

upon the diaphragm of the eye-piece. If the disc be not in focus I turn back the screw of the eye-piece glass, or if this be not sufficient I shift the diaphragm until I get my focus. I then bring the lines on the stage into focus, and parallel with the eye-piece lines. If the objective shall be found to have the usual distortion, it will instantly be seen that although the central stage line is straight and perfectly parallel with, and covered from the top to the bottom of the field by the central eye-piece line, yet the other stage lines bend their ends in a curvi-linear direction from the centre of the field. Upon moving the stage, the line that appeared straight assumes the circular form, and one of the bent lines gets into the centre and assumes its straight appearance, and so on, at every motion of the stage.

Upon one occasion, working with a fifth, I was puzzled by a distortion of a kind I could not understand, and a distortion I had never before noticed. Upon resorting to my tests, I found the lines bent not from their centre, but straight and parallel through half the lower part of the field, and through the upper three-quarters of the field they spread out like the feathers in the crest of the Prince of Wales. I then knew that the lens (perhaps by a blow or fall) had become displaced, so as to destroy its parallelism.

I shall be glad if discussion may evolve any better Tests.*

ACTION OF MERCURY ON THE LIVER.

The valuable report of the Edinburgh Committee of the British Medical Association on the Action of Mercury on the Liver, added very largely to our knowledge of the subject, without altogether settling a great many important questions concerning the therapeutics of the drug.

Few physicians who have had any practical experience of the use of mercurial purgatives in cases of so-called "biliousness," will deny that their immediate effect is decidedly beneficial, although many may be deterred from employing them by the belief that, once begun, they must be continued, and will ultimately prove highly injurious to the patient. The relief occasioned by a blue pill and a saline purgative is a matter of everyday observation; but the *modus operandi* of the mercury is a question on which much difference of opinion prevails, and any attempt to answer it must depend, to a considerable extent, on the view taken of the pathology of "biliousness." Do the dull, heavy, and languid feelings, the disinclination to exertion, mental

* Being in communication with E. Wheeler, Esq., of London, we can procure for any one desiring them these Tests. Price from \$1 to \$3.00, in proportion to the minuteness of the writing.—Ed.

or bodily, the irritable or peevish temper, the failing appetite, the muddy complexion, and dingy conjunctiva, which most persons know, alas! too well, owe their origin to catarrhal changes in the gastric and intestinal mucous membranes alone? or is popular pathology partly right in ascribing them to "bile in the blood" or a "sluggish liver?" For our part, we are inclined to hold the latter opinion, and to believe that not without reason are the disappearance from the eyes of the yellowish tinge which seems as if it only required to be somewhat deepened to become jaundice, and the co-incident appearance of bile in the stools after a mercurial purgative, pointed to as proofs that too much bile in the blood is (partly at least) the cause of biliousness, since with its removal from the system the symptoms disappear. So long as it was supposed that bile was formed in the blood, and only separated from it by the liver, such a view as this might meet with ready acceptance; but how are we to reconcile it with the doctrine of most physiologists, that bile is not separated from the blood by the liver, but is formed within that organ itself? Fortunately, this is not difficult, for Schiff has shown that we have been latterly accustomed to take too narrow a view of the functions of the liver, and that it separates bile from the blood, or, as we may term it, excretes, as well as forms or secretes it. This he did by tying the ductus choledochus in dogs, and putting a canula into the gall-bladder, so that he could collect the whole of the bile secreted by the liver. Immediately after the operation the flow of bile was abundant, but in the course of half-an-hour it became greatly diminished, and remained so, never again reaching the amount at first observed. This curious result Schiff found to be due to the bile being all removed from the body by the canula, instead of passing, as it normally does, into the duodenum, whence it is reabsorbed into the blood, and again excreted by the liver. In the first half hour after the fistula was made, the liver was excreting as well as forming bile, and so more flowed from it than in any subsequent period when it was only forming it.

Whenever Schiff introduced bile into the blood, either by injecting it directly into the veins, or putting it into the duodenum, stomach, or areolar tissue, the flow of bile from the liver was at once increased, but again diminished when the additional bile had been excreted. By another series of experiments, he also found that not only can a certain quantity of bile be present in the blood without producing jaundice, but that it probably is always present. We thus see that, normally, a great part of the bile goes round in a circle, from the liver into the duodenum, thence into the blood, so to the liver again, while another part is carried down by the contents of the intestine, and, after becoming more or less altered, passes out of the body with the feces.

Let us now consider what the result will be if the quantity of bile circulating in this way should be increased. All observers are agreed that abundant food increases the secretion of bile; and we will suppose that this has been done by continued good living and a succession of heavy dinners, such as most Englishmen are accustomed to indulge in at Christmas time. The stomach and intestines, in all probability, also become disordered, and it would be hard to say what part of the condition in which the patient then finds himself is to be assigned to them and what to the bile; but this we can readily see, that all the symptoms that an excess of bile in the blood can produce, short of jaundice, will be occasioned; nor can these be removed by any purgative medicine, which, like aloes, will merely act on the large intestine. The colon may be cleared of its contents, but the bile will go on undisturbed in its accustomed round. Very different, however, will be the result if a purgative be administered which will act on the duodenum, as we will assume mercury to do, more especially if it be combined with such an one as sulphate of magnesia, which will act on the rest of the bowels. The mercury stimulates the duodenum to peristaltic contraction, the bile is hurried rapidly downwards, the remainder of the intestine is likewise contracting vigorously, and in a short time all chance of absorption is gone, for the bile has been finally evacuated. All excess of bile has thus been got rid of, and, as far as it is concerned, the liver, the duodenum, and other organs may now go on performing their functions in the normal way, until some fresh indiscretion on the part of the patient causes a disturbance.

In the account we have just given of the action of a mercurial purgative, we have assumed that it acts on the duodenum. Now, this we cannot at present directly prove; but we have the indirect proof afforded by the fact, observed by Radziejewski, that leucine and tyrosine, which are products of pancreatic digestion, appear in the feces after the administration of mercurials, as well as that yielded by the large evacuations of bile which calomel produces, and which, as Buchheim has shown, really give their characteristic green color to the so-called "calomel stools." By thus causing elimination of bile, and lessening the amount circulating in the blood, calomel acts as a true cholagogue, in the sense in which the word was employed by those physicians who looked upon the liver merely as an excreting organ, although, as modern experimenters have proved, it may lessen the amount actually secreted; and this it may do in a double fashion, for not only does it diminish the quantity which has to be excreted by the liver in the manner already explained, but as the Edinburgh Committee of the British Medical Association have shown, it likewise lessens the formation of bile. In their experiments, the diminished secretion which followed

mercurial purgation could not be due to the prevention of re-absorption, for the whole of the bile was regularly removed from the body as quickly as it was secreted, and we are, therefore, obliged to attribute it to diminished formation. What the cause of this may be, we are not at present in a position confidently to state; but we know that fasting lessens the formation of bile, and if the food be hurried out of the intestine by a purgative before it has time to be absorbed, it might just as well not have been eaten at all.

We have now seen how an excess of bile may be present in the blood without the liver being either "sluggish" or torpid; and it seems to us that the difference of opinion which has hitherto prevailed regarding the action of mercurials is in great measure due to attention having been directed to the amount of bile poured out from the liver, instead of what is of much more importance in reference to "biliousness"—viz: the quantity which remains in the blood after a dose of blue pill or calomel.

HOW DO THE SPERMATOZOA ENTER THE UTERUS?

After a careful review of the various opinions on this subject, Dr. Beck of Fort Wayne, Indiana, presents the following observations as affording the most rational answer yet suggested to the question of the mode of ingress to the uterus of the spermatic fluid:

August 7, 1872.—Mrs. H. L., aged thirty-two years, of strongly-marked nervous temperament, blonde, married eight years, has one living child, son, seven years old; has had one abortion; last pregnancy was six years ago; commenced to menstruate at fourteen years of age; present illness has existed six years, dating evenly with abortion; symptoms which have been apparent during its course were dragging and weight in pelvis, more or less pain in back and loins, slight vesical and rectal irritation, inability to walk without great fatigue, inability to lift weight of any moment, slight leucorrhœa, and a sinking sensation referred to the epigastric region—supposed cause to be a 'falling' of the womb; present condition as regards menstruation, menstruates regularly every twenty-eight days, normal as to amount and suffers no pain of any moment, leucorrhœa very slight as to amount exists all the time, is white, glairy, and unmistakably uterine; pain is intermittent by no means severe, and is referred to the back, loins, inguinal and sacral regions; locomotion is impeded to a great extent by the consequent fatigue; as to other symptoms, she is usually constipated, and has a copious eruption of acne upon the face: of physical signs, the touch shows the os uteri just inside the vulvæ, the speculum was not

used; the probe shows the pelvic-uterine axis to be changed considerably, but no flexion of uterus, and probe enters cavity two and one-half inches: Diagnosis, prolapse of the uterus in the second stage; treatment, mechanical support to the uterus by means of McIntosh's stem pessary, and internally ferruginous tonics, iodide of potassium, and liq. potass. arsenit. This much for the history of the case, as compiled from an office examination.

Calling at the residence of the patient next day for the purpose of adjusting the uterine supporter, I made an examination by the touch, and, upon introducing my finger between the pubic arch and the anterior lip of the prolapsed cervix, I was requested by her to be very careful in manipulating those parts, as she was very prone, by reason of her passionate nature, to have the sexual orgasm produced by very slight contact of the finger. Indeed, she stated that this had more than once occurred to her, when making digital investigation of herself. Here then was an opportunity never before afforded any one to my knowledge, and one not to be lost upon any consideration. Carefully separating the vulvæ with my left hand, so that the os uteri was brought clearly into view in a strong light, I swept the right forefinger across the cervix twice or three times, when, almost immediately, the orgasm occurred, and the following is what was presented to my view:

The os and cervix uteri had been firm, hard, and generally in a normal condition, with the os closed so as not to admit the uterine probe without difficulty; but immediately the os opened to the extent of fully an inch, made five or six successive gasps drawing the external os into the cervix each time powerfully, and at the same time becoming quite soft to the touch. All these phenomena occurred within the space of twelve seconds' time certainly, and in an instant all was as before; the os had closed, the cervix hardened, and the relation of the parts had become as before the orgasm.

Now I carefully questioned my patient as to the nature of the sensations experienced by her at the period of excitement, and she is very positive that they were the same in *quality* as they ever were during coition, even before the occurrence of the prolapse; but admits that they were not exactly the same in *quantity*, believing that during coition the orgasm had *lasted longer*, although not at all or in any respect different as to sensation. I had almost forgotten to make mention of the intense congestion of the parts during the "crisis," and introduce the statement here.

When, in connection with the statement of the patient, who is a very intelligent and appreciative lady, I add my own observation to the effect that there was no inflammation of any kind present either in the os or cervix uteri, the vagina, bladder, or

rectum, and that the parts were in an entirely normal condition except as to position, I think we had the phenomena before us which are always present during coition; and the passage of the spermatie fluid into the uterus was explained fully, satisfactorily, and beyond the shadow of a doubt.

I do not doubt that many of my readers have seen in streams of water, sometime during their lives, a species of fish known as the "sucker," which has a very peculiar shaped mouth. These fish, when at rest in the water, pass the water through their mouths and out at their gills as all other fish do, but, in doing so, they make a peculiar suction motion with their mouths, in which the mouth is inverted into itself. Precisely such a motion does the uterus make during the period of sexual excitement. This is a homely illustration I am aware, but I know of none other in nature which answers so well.

This then is the explanation of the passage of the spermatozoa to their destination: the act of coition arouses some special nervous action in the uterus which causes it to act in the manner above described, when the "crisis" arrives. I do not believe that the operation is either purely physical, or simply mechanical, but feel sure that the great nerve-centres have more or less the control of the matter, although perhaps this is not now demonstrable.

It had been my intention to have discussed the bearing of the facts here presented upon sterility, as due to a mal-position of the os, and its consequent inability to take upon itself the necessary action; but find that this subject has grown to such magnitude in this paper, that policy suggests that it be postponed to a future time. The views presented in connection with these facts are of course in a crude condition as yet, and will bear discussion and further observation; but I feel sure that the facts stand for something, and that they offer to the profession *the first and only reasonable answer* to the question of "How do the spermatozoa enter the uterus?"—*St. Louis Med. and Sur. Journal.*

MEDICAL GLEANINGS.

A GOOD LESSON ON DIAGNOSIS.—In a clinical lecture in the Liverpool Royal Infirmary, Dr. Walters makes the following very sensible remarks:—It may seem to you an easy matter to make out the nature of a case. A man of experience will put a few leading questions, make, perhaps, only a slight physical examination, and at once pronounce a correct opinion of the existing ailment; and you may imagine that you will readily be able to do the same. But do not be mistaken. This power of rapid diag-

nosis has been the result of long observation and great pains-taking; and you will find even that the man of the most matured judgment will often spend a long time over a case—will examine carefully all its details—before he will venture on an opinion of its nature. If you wish to attain to the power of rapid diagnosis—of rapid diagnosis in ordinary cases—you must begin by examining, with the greatest care, every detail of a series of cases which are the best marked instances of their kind. The study of these will prepare you to understand the varieties and complications which so constantly present themselves at the bed-side.—*Pacific Med. and Surg. Journal*, Oct. 1872.

ON THE EXHIBITION OF CALOMEL.—The changes which preparations containing calomel undergo by being kept, are discussed by Vulpian, in an article we translate from the *Allgemeine Medicinische Centralzeitung*, March, 1872:

In mixtures of calomel with white sugar, magnesia, or sugar of milk, no signs of corrosive sublimate can be found, even after three months. Traces of sublimate do appear in a mixture of calomel, bicarbonate of soda, and sugar of milk, kept an equal time. Decided quantities were present in a mixture of calomel, bicarbonate of soda, and cane sugar, preserved the same period, and exposed to moisture. The last mentioned is the only preparation which he decides should not be kept on hand for pharmaceutical purposes, but should be freshly mixed when wanted. The occasional change of small portions of calomel into corrosive sublimate, in the stomach or bowels, he does not consider of any serious moment, and calls attention to the opinion lately expressed by Dr. Zeroni, of Mannheim, who attributes the cure of a case of cerebro-spinal meningitis by large doses of calomel, to this very change, in some degree.—*Half-Yearly Compendium*.—*Atlanta Medical and Surgical Journal*.

HYPODERMIC INJECTIONS OF ERGOT IN UTERINE FIBROMA.—Prof. Hildebrandt has treated nine cases of uterine fibroma by hypodermic injections of ergot. His results seem to be of the greatest importance. He used of the watery extract of ergot 3.0 grs., and of water and glycerine 7.5 each. The alcoholic solution causes more pain in the skin. He injected about one drachm daily for several weeks, at the lower part of the abdomen, because he found less irritability there. He covered the little wound with cotton and collodion, at the period of menstruation (bleeding occurred easily), and also after the tenth or fifteenth injection, because the fluid usually ran away. One tumor reaching the navel was removed in fifteen weeks; another, reaching the ribs, was decreased so as only to reach to the navel, and all bad symptoms disappeared. In four cases large decrease and entire relief was noticed. One case did not allow that treatment, because of excessive pain; another one, because of the poisonous

action of the drug. In each case the troublesome symptoms, menorrhagia and fluor albus, disappeared.

Baths and operations, or other local treatment, are sometimes not allowable or impossible, therefore, a trial with this method is recommended.—*Berlin Klin. Wochen.*—*Indiana Journal of Medicine.*

NEW METHOD OF MAKING BEEF-TEA.—In order to meet the daily-felt want of concentrated fluid meat food, a want not supplied by beef-essence, as ordinarily made, Dr. H. C. Wood has invented the following process, and has found in practice that it works well:

Take a thin rump stake of beef, lay it upon a board, and with a case-knife scrape it. In this way a red pulp will be obtained, which contains pretty much every thing in the stake, except the fibrous tissue. Mix this red pulp thoroughly with three times its bulk of cold water, stirring until the pulp is completely diffused. Put the whole upon a moderate fire, and allow it to come slowly to a boil, stirring all the time to prevent the "caking" of the pulp. In using this, do not allow the patient to strain it, but stir the settlings thoroughly into the fluid. One to three fluid ounces of this may be given at a time.—*New Remedies.*

TANNIN PACKING IN PROLAPSUS UTERI, ETC.—Dr. G. P. Hachenberg of Rochester, N. Y., has found the free application of tannin very efficacious in relaxations of the uterine, vaginal and other tissues. He says: "For many years I have treated prolapsus uteri by packing tannin around the mouth and neck of of the womb. When surgeon in charge of the U. S. Hospital at Fort Randall, D. T., a laundress of the institution was much troubled with chronic prolapsus uteri. She had worn a pessary for many years. I removed the instrument, and treated her with success by tannin packing. The application usually was made in the morning of the day when she was to do a heavy day's washing. This poor woman said, after making an application: 'after you put that medicine in I felt well and strong; I feel as if I had no womb.' Since that time, I have treated with uniform success many lady patients who were subject to prolapsus uteri. As I have hardly failed to control the most obstinate case of prolapsus by this treatment, I discard the use of the pessary. The packing is likewise indicated in some cases of displacement of the uterus—indeed in all, when complicated with prolapsus. As a remedy for leucorrhœa, where the seat of the inflammation is at the mouth of the womb or within the vagina, it usually gives prompt relief. A few months ago a lady consulted me for a chronic ulceration of the rectum, located within two inches of the sphincter. So sensitive were the effected parts, that almost any local application caused pain and unpleasant constitutional effects. For weeks I treated the case with an injection composed of tannin, glycerine and black wash, with some

benefit. Finally, I resorted to tannin packing into the rectum once a week. In a month the discharge of pus and sanious matter ceased, and the patient rapidly increased.—*Med. Record.*

ECTROTIC TREATMENT OF SMALL-POX AND SCARLET FEVER.—Dr. Alex. Watson records several cases of these diseases in which the external application of carbolic acid proved of signal service. In one case of small-pox which he saw at the period of the appearance of the papulæ, he ordered enema, and the patient, a girl of eleven, to be sponged all over with tepid carbolic acid soapsuds. On the following day there was every appearance that it was about to be a severe case of confluent small-pox. She was directed to be sponged again with warm carbolic acid soapsuds, and immediately after the whole body to be painted over with the carbolic acid glycerine of the British Pharmacopœia. Some smarting was experienced on the parts that had been scratched, but otherwise only a general glow of warmth. Five grains of Dover's powder were given to allay irritability, after which the patient slept calmly for several hours, and in the evening the patient was sponged again. No vesicles formed, and in a few days she was convalescent. The atmosphere of the bed-room was in this, and other cases, saturated with the vapor of carbolic acid, by means of sheets hung up in place of doors and windows, and constantly wetted with the solution of the acid.—*Lancet*, July, 13, 1872.—*Practitioner.*

ANCIENT STATE OF SURGERY IN SCOTLAND.—When the surgeons of Edinburgh were, in 1505, incorporated under the denominations of surgeons and barbers, it was required of them to be able to read and write, "to know anatomie, nature, and complexion of everie member of humanis bodie, and lykwayes to know all vaynes of the samyn, that he may make flewbothemie in due time;" together with a perfect knowledge of shaving beards. These were all the qualifications that seemed necessary to the art of surgery at the beginning of the sixteenth century. The practice of physic was, if possible, in a still more deplorable state,—*Campbell's Journey from Edinburg to the Highlands.*

THE CÆSAREAN OPERATION.—The first authentic instance of this operation in the British Isles, was that performed with success by Mary Dunally upon Alice O'Neal, in Ireland, 1739, after a labor of twelve days; and the first *recorded* in the United States, by a girl fourteen years of age upon herself, in 1812. Of the first 38 cases operated upon in Great Britain, covering the period from 1739 to 1845, but four are recorded, one being that referred to as the work of a common midwife. Several women have been known to recover, and their children live, after the latter have been removed from them through a rent produced by the horn of a bull or cow.—*Am. Jour. Obstetrics.*

CHLORAL IN VENEREAL ULCERS.—Dr. F. Accettella has found chloral as a topical application in this affection superior to the acid nitrate of mercury. After the first applications the bottoms of the ulcers cleaned off, healthy granulations sprang up, and the ulcers were converted into simple sores. He used fifteen grains of chloral hydrate to the drachm of water, brushed lightly over the surface of the ulcer. For erosions and simple ulcerations, he employs a more dilute solution.—*American Practitioner*.

ORGANISMS IN SMALL-POX AND VACCINE LYMPH (Cohn).—It has been already known that the lymph of small-pox and vaccinia contain numerous organisms, but their exact nature is somewhat undetermined. The organisms are minute globular bodies, which are often grouped together, but do not possess spontaneous movement. The author found that when the lymph, after removal from the body, is kept at the temperature of the body, and secured from evaporation and contamination, the organisms increase in number up to a certain point. He looks on these bodies as spherical bacteria, and would name them from their shape microsphaera. Spherical bacteria of similar appearance, and also devoid of the power of voluntary motion, have previously been found in urine, milk, albumen, etc., and in these substances they act as ferments tending to split up the chemical molecules. The author supposes that these small-pox microsphaera may have a similar influence on the fluids of the body, and so produce the poison which leads to the symptoms of that disease.—*Glasgow Med. Jour.*

ANTIDOTE TO CARBOLIC ACID.—Huseman (Jour. Chem. Soc. from Chem. Centr.) does not find the fixed oils to produce any good effect, and finds the best antidote to be "sugar-lime." The latter is prepared by dissolving 16 parts sugar in 40 parts water, adding 5 parts of slacked lime, agitating frequently, filtering and evaporating at 100 deg. C. The liquor calcis, saccharatus of the Br. P., could be concentrated to the same result.—*Chicago Medical Times*.

THE USE OF ARSENIC IN GREEN COLORS is made the subject of special and elaborate report, by F. W. Draper, in the Third Annual Report of the Mass. State Board of Health. The arsenite of copper, Scheele's green, and the aceto-arsenite of copper, Schweinfurt green, are the two substances employed, but the names are used interchangeably, and other terms, as Paris green, emerald, and mountain green, are employed for the same substance. In England, in 1862, 500 to 700 tons of arsenical colors were manufactured, and one manufacturer of paper-hangings used two tons of arsenic weekly. A large quantity of this poisonous pigment is used for artificial flowers. Hofmann found ten grains of absolute arsenic in a single twig of twelve leaves. The

light fabric called "tarlatan" is sometimes loaded with this color. Prof. Nickols, of the Mass. Institute of Technology, found a sample of this cloth to contain eight grains of arsenious acid to each square foot. Many cases of poisoning or injury of the workers in arsenical papers, flowers and cloth, are given. At a ballet in Hamburg nearly all the dancers were more or less poisoned by tarlatan dresses; the effects were cutaneous eruptions, chronic inflammation of the stomach and bowels, nervous debility and prostration and sometimes more acute symptoms.

Children's toys and paints sometimes contain these poisonous greens. The bright green paper in common use is poison-colored, and is sometimes used for wrapping confectionary. A watch-maker had mucous ulceration, from working near a green paper shade strongly heated by the gas light. Public attention has been often enough called to cases of poisoning from green wall-paper. It is now believed that in these cases the arsenic is received mechanically; it is not volatile at ordinary temperature; and the dust settling in green-papered rooms is found to contain arsenic.

In the Western States, we must add another item to the list of unwarranted uses of arsenical green, viz.: its application to potato and other growing food plants to kill insects. It has not been established that ordinary plants take up any portion of arsenic placed upon it, though there have been some accounts of arsenic having been found in the ash of plants growing in the impure air near chemical works. But we apprehend that there is greater liability that the poison may be carried mechanically and adhere to food. Although its proportion in the soil is slight if equally distributed, its insolubility is such that it may be collected by rains and freshets.—*Mich. University Med. Jour.*

SIMPLE TEST FOR ARSENIC, ANTIMONY, AND PHOSPHOROUS.—The solution of the substance to be examined is first considerably diluted with water, and poured into a wide mouthed bottle, to the cork of which are fastened a number of pieces of parchment paper, previously saturated in acetate of lead, nitrate of silver, and sulphate of copper. A few drops of sulphuric acid are now added, some pieces of zinc thrown in, and the cork put on. In case any gases are liberated, they will react on the strips of paper, and the color will disclose to what particular element the reaction is due. Phosphuretted hydrogen does not blacken nitrate of silver and acetate of lead, but does act upon sulphate of copper. Antimoniated and arseniated hydrogen do not affect the nitrate of silver and sulphate of copper, but blacken the lead salt. Sulphuretted hydrogen, however, blackens all three of the above metallic solutions. In order to decide what elements are present, the strips of paper are to be macerated in a solution of cyanide of potassium. If the coloration immediately disappears, it was due to sulphuretted hydrogen; if it slowly changes in cold and

more rapidly in heat, it was caused by phosphorus or antimony; if it only bleaches a little and turns brown, and does not disappear when heated, it may be traced to arsenic. For ordinary purposes, and rapidity of work, this method appears to be sufficiently accurate, and will enable the operator to dispense with the more cumbersome Marsh apparatus.—*Druggists' Circular*.

THE DISINFECTION OF ROOMS.—Dr. George Derby, Professor of Hygiene in Harvard University, writes to the *Boston Medical and Surgical Journal*, of December 5, as follows:

"Among aerial disinfectants, chlorine and sulphurous acid are most useful, but neither of these gases can be added to the air of a room, in sufficient amounts to destroy the specific poison of small-pox without making the air irrespirable. Organic impurities of all kinds attach themselves to moist surfaces, and sulphurous acid gas seizes with avidity upon everything holding moisture. To completely disinfect a room, including its carpets, furniture, and wall paper, close the doors, windows and chimney; put from one to two pounds of brimstone (according to the size of the room) in an iron pot, pour over it a little alcohol, set it on fire and leave the room for four hours. This process is injurious to the colors of many fabrics, and to gilded articles, and this injury corresponds to the degree with the amount of moisture present in the room.

"When disinfection by sulphur fumes is impracticable, the next best thing to do is to wet the carpet, furniture, and walls with a strong solution of carbolic acid, one part in fifty of pure acid.

"Clothing which can be washed may be disinfected by boiling in water for one hour.

"Bedding and clothing which cannot be washed may be disinfected by exposure for four hours to dry heat at a temperature of 225 deg. to 300 deg. Fahr. This can be done in a large brick oven;" but every city should have attached to its hospital for infectious diseases an oven especially arranged for the purpose."

MEDICAL TREATMENT OF PROLAPSE OF THE WOMB.—Dr. Andreef discards pessaries in such cases. In some cases he reports the treatment pursued consisted in replacing the uterus while the woman was in a recumbent position. Then, with the aid of the speculum, the fold of the vagina, that is to say, the part surrounding the os, was painted with half a drachm of a tincture composed of one part of tincture of iodine and one part of alcohol. He diluted the official tincture of iodine, because the undiluted tincture sometimes sets up acute catarrh of the vagina, and even of the uterus, as he had had an opportunity of observing previously. After the application of the tincture, the patient remained for three days in bed, and had an injection four times a day of pure spring water at a temperature of twenty degrees R. The painting was then re-applied, and the douches repeated.

After a repetition of this plan of treatment four times, the patient found herself well, and was dismissed. Four months subsequently she was pregnant and quite healthy; no descent of the uterus had occurred.—*Med. and Surg. Reporter.*

A RELIABLE TEST OF DEATH.—In 1870, a prize of twenty thousand francs was offered by the Academy of Sciences, of Paris, for the discovery of some positive sign of death; one which can be applied at any time by non-medical persons, requiring no apparatus, and unmistakable in its indications.

Of course a number have been proposed. The latest, and so far the best, is that suggested by Dr. Hugo Magnus, of Breslau, in *Virchow's Archiv* for August 19th, 1872. It is simple, physiological, and conclusive, being based on the fact that when the circulation positively ceases the man is dead. No matter how profound the coma or trance, no matter how death-like the lethargy, some circulation *must* continue, be it ever so sluggishly. Once it has stopped, resuscitation is impossible.

All that one has to do, therefore, is to *tie a string firmly around the finger of the supposed corpse*. If there is the least spark of life left, that is, if the blood circulates at all, the whole finger, from the string to the tip, will gradually turn a bluish red, from the engorgement of the veins. Nothing else, no post-mortem infiltration, can be mistaken for this appearance.—*Phil. Med. Times.*

Book Notices.

OBSTETRIC APHORISMS; FOR THE USE OF STUDENTS COMMENCING MIDWIFERY PRACTICE. By JOSEPH GRIFFITH SWAYNE, M. D. Second American from the fifth revised London edition, with additions by HENRY HUTCHINS, M. D. 1873. Philadelphia: Henry C. Lea. Cincinnati: R. Clarke & Co. 16mo. Pp. 189.

This little work we cordially recommend to students and young practitioners of medicine. We know of no work of the kind equal to it. It is indeed *multum in parvo*. It has been undertaken by the author in accordance with a wish often expressed to him by his pupils and is founded upon his experience of the wants of those who are commencing midwifery practice; and we can say that it is well calculated to fulfil its purpose.

If disposed to find fault with anything said in the work, it would be the advice, on page 14, by the editor, enclosed in brackets, viz., "that the young practitioner *never* should go to the bedside of one in confinement *without the forceps*." Now, our advice always is *never* to go with the forceps. To be accoutered with instruments is to be subject to the temptation to use them, when with a little patient waiting nature, in nine cases out of ten, would bring around everything right. Vastly more is to be feared from meddlesome midwifery than from

want of assistance. There is always time enough to send for forceps when it becomes demonstrated that they will be required.

SURGICAL DISEASES OF INFANTS AND CHILDREN. By M. P. GUERSANT, Hon. Surgeon of the *Hopital des Enfants Malades*, Paris, etc. Translated by RICHARD DUNGLISON, M. D. 1873. Philadelphia: H. C. Lea. Cincinnati; R. Clarke & Co. 8vo. Pp. 354.

This will be found a valuable work by the practitioner, in the treatment of the surgical diseases of children. It embraces very nearly the whole domain of infantile surgery. The only omissions are those of very rare malformations, aneurisms of the arteries, varix, or varicocele, and a few other minor points. In omitting these the author was induced by the desire to limit himself to offering to students and practitioners what he had learned by examination and study, and upon which he could base very practical opinions.

There are seventy-three chapters devoted to the consideration of cervical adnitis, phimosis, fractures, tracheotomy in croup, hypertrophy of the tonsils, prolapsus ani, burns, hare-lip, tongue-tie, coxalgia, caries of the vertebra, foreign bodies in the air passages, incontinence of urine, leucorrhea, club-foot, erysipelas, ranula, crushed fingers, and a very large number of other topics that we have not space to mention. The treatise may be justly regarded as a reflection of the views of the most distinguished surgeons of France. Being highly practical, it will undoubtedly be held in high esteem by every physician who consults its pages.) Price \$3.

FISTULA, HÆMORRHOIDS, PAINFUL ULCER, STRICTURE, PROLAPSUS, AND OTHER DISEASES OF THE RECTUM: THEIR DIAGNOSIS AND TREATMENT. By WM. ALLINGHAM, F. R. C. S., England, etc. 1873. 12mo. Pp. 265. Philadelphia: Lindsay & Blakiston. Cincinnati: Geo. E. Stevens & Co.

Although the anus and rectum may not be regarded as inviting localities for a person to carry on researches in, yet they are important regions, and are subject to a variety of affections very painful in their character, and sometimes even threaten life.

Thoroughly well informed as the majority of general practitioners are on most professional subjects, rectal diseases are a class on which much uncertainty prevails. This, as the author states, is greatly to be deplored, as many of these maladies, in their earlier stages, are curable by very simple means, and often without recourse to any operation.

The work on our table is highly practicable in its character, giving the general practitioner just such information as he needs. The author has had for years unusual opportunities for observing diseases of the rectum, and has related his experience in a clear, easily understood style. We feel quite confident that every practitioner who purchases the work will regard it as a valuable addition to his library.

In this second edition, errors have been corrected, and additions, chiefly relating to treatment, have been made.

DISEASES OF THE OVARIES: THEIR DIAGNOSIS AND TREATMENT. By T. SPENCER WELLS. 1873. 8vo. Pp. 478. New York: D. Appleton & Co. Cincinnati: Geo. E. Stevens & Co.

This is a very complete work upon the ovaries and their diseases, and should find a place in the library of every physician. If not so frequently the subject of disorder as the uterus, vagina, and other of the female generative organs, the ovaries are sufficiently liable to disease to make them and their abnormal conditions worthy the careful study of every practitioner. No doubt many more women suffer

from ovarian affections of some kind or other than is often supposed on account of the ignorance in this department of physiology and pathology. Hysterical and neuralgic affections, *weaknesses*, loss of appetite, melancholy, chlorosis, etc., no doubt, often have their source in the ovaries when it is supposed to be in the womb, and is treated accordingly to the detriment of the patient.

This is an entirely new work from that published by the author in 1865 containing reports of 114 cases of ovariectomy. That volume was little more than a simple record of actual facts. This one is much more; for while it gives the chief particulars of 500 cases in the tables which may be found on pages 402-429, it enters fully into the anatomy, physiology, and pathology of the ovaries, giving full information of what has been discovered in this department of medical knowledge.

We feel sure that the profession will feel under obligations to Appleton & Co. of New York, for presenting them with the work of Mr. Wells simultaneously with its appearance in England. It is handsomely printed, and contains many cuts.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA. Svo. Pp. 432.

The Society held its meeting at Wheeling, June 5, 6, and 7, 1872, and was called to order by the President, Dr. J. M. Lazzell.

To judge from the volume of Transactions before us we would conclude that the Society is in a very healthy condition. A number of very able papers were read which are herein published. Among them are "Sudden Death in Puerperal Cases," by S. L. Jepson, M. D.; "Meteorology, and Epidemic Diseases of the Kanawha Valley," by B. Roemer, M. D.; "Synopsis of Insanity," by A. H. Kunst, M. D.; "Plastic Surgery," by John Frissell, M. D.; "Strangulated Inguinal Hernia," by H. W. Brock, M. D.; "Puerperal Fever," by E. D. Safford, M. D.

The officers for 1873 are President, R. H. Cummins, M. D.; Vice-Presidents, B. Roemer, M. D., R. P. Davis, M. D., E. S. Moore, M. D.; Secretary, M. W. Dent, M. D.; Treasurer, J. C. Hupp, M. D.; Censors, Drs. Bates, Young, Hall, Hildreth, Allen, Davis, and Safford.

Editorial.

TO SUBSCRIBERS.—We hope our subscribers will not forget that we have commenced on another volume, and that our terms are in advance. A number are in arrears for 1872. We really hope they will remit right away. If not, we will be under the necessity of expunging their names from our subscription list, as we cannot supply the journal when it is not paid for.

A FORMIDABLE opponent to Mr. Darwin's theory of the development of man from some lower animal has appeared in the person of Professor Max Muller. The distinguished Oxford professor, the most accomplished linguist of the day, has caught Mr. Darwin, when he ventured on his own particular domain, and has given him no quarter. In a lecture delivered before the Liverpool Literary and Philosophical Society, the substance of which is reported in a recent number of *Nature*, Professor Max Muller addressed himself to the hypothesis of the possibility of higher animals acquiring the faculty of articulate

speech. Animals, says Professor Max Muller, must be animals so long as they lack the faculty of abstracting general ideas. There is no natural bridge between the language of animals and the language of man, and to account for human language such as we possess would require a faculty of which no trace has ever been discovered in lower animals. Mr. Darwin, indeed, admits that articulate language is peculiar to man, but contends that animals have in a lower stage of development the identical faculties necessary in the invention of articulate expressions. To this the Oxford professor replies that no development of mental faculties has ever enabled an animal to connect one single definite idea with one single definite word. Both man and animals possess in common emotional language, because man is an animal; but animals do not possess rational language, because they are not man. This distinction between emotional and rational language is not fanciful and artificial, but radical. It is proved by various evidence, amongst which is that derived from clinical observation in brain diseases. "Mr. Darwin has said there are savage languages which contain no abstract terms; but the names for common subjects, such as father, mother, brother, etc., are abstract terms, and unless Mr. Darwin is prepared to produce a language containing no such names, his statement falls to the ground, as the result of a misconception of the real nature of a general idea as distinguished from an emotion." This question of the descent of man, as Professor Max Muller said, may be called the controversy of the nineteenth century, and requires the whole knowledge of the nineteenth century to answer it adequately. Instead of that, it is remarkable that from a very limited and imperfect generalization, adduced, comparatively speaking, from a few isolated facts, or at least from facts which can only be connected by the employment of the "imagination in science," a large section of scientific men have arrived at a conclusion which is opposed by the strong instinct and wide-spread belief of mankind.—*Med. Times & Gazette.*

BOARD OF HEALTH.—The time is approaching when the Board of Health will be reorganized by appointments to fill the places of those members whose terms have expired, and by the election of a mayor who is *ex officio* a member of the Board. It has often seemed surprising to us that the profession exerted so little influence in the construction of the Board. For several years not a single medical man has had a seat upon it; but, on the contrary, it has been composed of non-professional men and politicians, no regard whatever being had to their qualifications for the position. The consequence is that a health officer is selected without reference to his scientific attainments, to whom is referred all subjects pertaining to the general health, and his decisions are ignorantly confirmed, right or wrong. A single medical man, in fact, in all matters of hygiene, is made the Board of Health, from whose decisions there is no appeal.

It occurs to us that, under the circumstances, the profession is very delinquent in the discharge of its duty in being so apathetic in what pertains to the public health. For a class of men who alone possess the knowledge necessary for intelligent action to allow themselves to be entirely ignored, and the duties which should devolve upon them to be assumed by the entirely ignorant, is discreditable in the highest degree. If, under the circumstances, one of their number gains a position that enables him to manipulate the Board and have laws passed regulating them, in which they have no voice, they are not deserving any sympathy.

Doctors differ in opinion and wrangle; so do lawyers, preachers, and all other men. Witness our state and national legislature. Where do we witness more differences of opinion expressed, or more wrangling

and actually fisticuffing than in them; and yet from year to year do we find the large majority of members made up from the legal profession on the ground that *their profession* renders them the best qualified to act as legislators.

But more another time.

ECLECTICISM DEFINED.—In last November's number of the *MEDICAL NEWS* was an editorial, with the above heading, commenting on certain resolutions, passed by the *Iowa State Eclectic Medical Association*, defining Eclecticism. Our article has been copied in full by a number of eclectic journals and replied to. Among them is the *Chicago Medical Times*, edited by Drs. Anson L. Clark and H. D. Garrison. We reprint the whole of their remarks, as they reprinted all of ours. We take the liberty to append a few foot notes, as we have not space for further reply:

"The foregoing article [referring to our article just quoted] is going the rounds of the medical press, being regarded as the stroke of a gladiator at the rapidly-advancing cause of eclecticism. Unlike Brother Scudder, who also republishes the article, we emphatically *do not* 'concur in Brother Thacker's deductions.' The people, and, with regret be it said, many in the profession, care and know but little of the principles which justify the use or rejection of agents, but readily distinguish the agents employed. These resolutions were no doubt penned rather for the guidance of the people than as a technical definition, yet in this latter respect the resolutions are very clear, since the principles leading to the exclusion of the agents are apparent to the reflecting pathologist. That 'very many regular physicians' rarely use these agents we are happy to learn, as the fact only shows the soundness of the eclectic position, and, further, that 'very many regular physicians' are adopting our views. We do not care particularly that 'very many regular physicians' should publicly announce themselves 'Eclectics,' but, for humanity's sake, rejoice that they are getting upon the Eclectic platform.*

"Brother Thacker' can see no difference between an antimonial and alcohol! Let us point out a few important differences. Alcohol is composed of oxygen, hydrogen, and carbon, which elements are normal constituents of the human organism.† By oxidation, these elements are brought into carbonic acid and water, which compounds are also normal constituents.‡ Antimony is a metal foreign to the animal economy, and whose every soluble preparation is poisonous and detrimental to the vital processes.¶ When introduced into the circulation, the system, principally, through the agency of the liver, exerts itself to its utmost ability in its elimination, which process very materially interferes for a long time with the normal functions of the organs so taxed.§ We are not on the stand to defend the indiscriminate use of alcohol, or any of the vegetable poisons, but we do claim that it is impossible to use the 'tabooed' articles with advantage to the patient.

"The resolutions only contemplate the use of copper and lead prepa-

* All poppycock.

† But are not normal constituents in their combination of alcohol—an entirely new substance is formed which is as foreign to the economy as any simple element not contained in the body, and is a poison.

‡ But its destruction implies destruction of other material.

¶ The same with alcohol.

§ Exactly so with alcohol; only that it involves in its elimination not only the liver, but the lungs, kidney, and skin, being the more potent poison of the two, and the necessity being more urgent to get rid of it. And it is eliminated largely as alcohol, and not as water, carbonic acid, etc.

rations topically (principally as washes and injections), but should absorption be shown to take place to any considerable extent, then would we regard their topical use as inadmissible. 'Brother Thacker's' philosophy in regard to absorption is the most transparent sophistry. Absorption of any remedy is necessary to gain its constitutional effect, no matter whether the remedy is absorbed through the mucous membrane of the stomach, or bowels, or through the skin. Mercury may be introduced into the general circulation by inunction with mercurial ointment as certainly as by absorption from the stomach. We object to the introduction of these agents into the general circulation by any means. 'Brother Thacker's' idea of giving lead by the mouth 'as a topical application' to the rectum, is analogous to bathing a patient in volatile liniment for a sprain of a finger. He further advocates the nonsense of attempting to charge the entire circulation with lead to the extent of getting its 'topical effect' upon some inaccessible organ. To accomplish this, to more than a homeopathic extent, enough of the lead salt must be introduced to precipitate all the carbonic and sulphuric acids present in the blood as well to coagulate several of the protein bodies;* then, if there remained sufficient of the lead salt, and *if the blood could move at all* with its load of coagula and insoluble matter, might 'Brother Thacker' hope for a 'topical effect' throughout his entire patient, from the soles of his feet to the crown of his head. Such doctrine 'may succeed very well among the ignorant who are unable to detect a very transparent folly, but it can have no success among intelligent people.'†

Brother Scudder also quotes our article, and discourseth as follows:

"We republish the above from the CINCINNATI MEDICAL NEWS, because it well illustrates the absurdity of some of the resolutions passed by Eclectic Societies this summer. Whilst admitting the truth of Bro. Thacker's deductions, we beg him to recollect that a dozen or score of country practitioners, coming together for a day, can hardly be called a representative body.

"Eclecticism in medicine reaches far beyond these resolutions—is not in fact embodied in them. It rejects in its totality the antiphlogistic treatment, and selects those remedies that conserve life—is, in fact, restorative. It rejects mercury and bloodletting, because they are the typical antiphlogistics; and the first, especially, because it is uncertain in its action, and may remain in the body as a disease-producing agent for months and years. In conclusion, we beg the Dr. to believe that our patrons are among the most intelligent of the community, and that we have a reputation that his school may well envy."

He confesses that our deductions are true, but denies that societies made up of a score or two of country doctors are representative bodies; which is rather depreciatory of the members of a State Society, and which we would think they would not take very kindly to. After this belittling of his friends, *he calls on us to believe that his patrons are the most intelligent of the community.* Now, Brother Scudder, country doctors are your patrons—they are these very members of the Iowa State Medical Society whom you assert haven't got sense enough to define their principles.

Brother Scudder, after insulting the large mass of his professional brethren, proceeds to define Eclecticism by saying that "it rejects in

* Alcohol retains all the poisonous acids in the system, besides other effete materials, and coagulates several of the protein compounds.

Lead is given by the mouth as a topical application to the rectum, the same as our Eclectic friends give a number of their indigenous astringents for the same purpose, and thus the same as bathe the whole body in volatile liniment for a sprain of a finger.

† We feel more confirmed in the correctness of the above expression quoted from our article, referring to the laity, since reading these "Editorial Comments," than before. We have sufficient confidence in the ability of the editors of the Times to exhibit it if there was sufficient principle in Eclecticism to justify its being made into a "school."

its totality the antiphlogistic treatment, and selects those remedies that conserve life—is, in fact, restorative." Precisely the doctrine of old John Brown, of a hundred years ago, and of Bennet of to-day. Old Brown was a drunkard, who was affected with rheumatism, and this doctrine afforded him an excuse to keep drunk all the time. Besides, as the natural condition of his system, by long dissipation, was a state of high stimulation, it can be easily understood, that allowing him any less than a quart of liquor a day would have been, with him, depressing treatment. But he never thought of founding a school of medicine; but published *his experience* for what it was worth, in the manner of all regular physicians, which others could follow or not according as their judgment was impressed. Bennet, neither, who never heard of the Eclecticism of this country, has ever proposed to found a school.

Now let some one call Brother Scudder incompetent, as he intimates his professional brethren of Iowa are, and give us some other definition of Eclecticism, for as yet nothing has been presented that will answer as a "peg on which to hang one's hat."

Since writing the above, the February No. of Bro. Scudder's journal has come along containing an article on intermittent fever, by an eclectic, in which we find the following prescription:

<i>Fowler's Sol. Arsenic,</i>	3 ij
<i>Glycerine, Water, aa</i>	3 ij
<i>Ol. Rose Geranium,</i>	gtts, iij
<i>Alcohol.</i>	3 j.

Of this the writer directs a teaspoonful three times a day to a child, and says "*children fatten on it.*"

We wonder if the author belongs to Bro. S.'s class of ignorant *country doctors*, who doesn't understand Eclecticism. Even if he is, he seems to have sense enough to observe favorable results from a particular treatment, and practice accordingly.

MEDICAL ATTENDANCE UPON PAUPERS.—We have purposed for some time to make this the subject of some remarks, and would have done so in our present number, but space did not permit. We have, however, received some resolutions passed by a number of the profession of Wheeling, W. Va., which expresses our views well, and which we will publish in our March number, if we succeed in preserving them.

SUGAR-COATED PILLS OF WARNER & Co.—We are indebted to this house for a case containing specimens of their sugar-coated pills. This method of dispensing medicines is becoming quite popular, but a drawback is that not unfrequently the pills are quite insoluble by a feeble stomach. Some manufacturers envelope the pillular mass with a gummy coating previous to using the sugar, and this material oftentimes resists the solvent action of the gastric juice. From our personal experience with Warner & Co.'s pills, we *know* that they possess the desired quality of solubility: and besides they are made of the purest medicines, which is not the case by any means with all other houses.

Our subscribers can rely that W. R. Warner & Co. are a reliable house, and that all their preparations are what they are represented to be. We hope they may be rewarded with a due share of patronage.

LOCATION FOR SALE.—Physicians in want of a good location for practice should read the advertisement of Dr. J. A. BLAND, of Scipio Ind. The price is moderate and terms easy; and we would presume, from the description that the location is desirable.

THE CINCINNATI MEDICAL NEWS.

VOL. II.

CINCINNATI, MARCH, 1873.

No. 3.

THE PSYCHOLOGY OF VICE AND CRIME.

Valedictory Address to the Graduating Class of the Cincinnati College of Medicine and Surgery. Delivered Feb. 17, 1873.

By J. A. THACKER, M. D., Prof. of Principles and Practice of Medicine.
Gentlemen of the Graduating Class :

At the close of each regular term of our College, it is the custom for Trustees, Faculty and Friends to meet together to witness the conferring of the degree of Doctor of Medicine, by the worthy President of the Board of Trustees, upon those members of the class who have fulfilled the requirements and been recommended by the Faculty as having attained to a proper proficiency in medical studies. In accordance with this custom we have met here this evening and witnessed your advent into the profession of medicine—have witnessed your being clad, as your diplomas state, with all the honors, dignities, privileges, and immunities of those who have been officially certified to as possessing the necessary knowledge and other stated accomplishments for the treating and curing of diseases.

It is also customary on these occasions for some one of the Faculty, on behalf of the Faculty, to have a few parting words with those who have just received the honors of the school. Having had them under our instruction, the most of them for two sessions of Lectures, and all of them for at least one, and having indorsed their proficiency by signing our names to, and placing the seal of the college upon, the parchments which have been given them, we feel identified with them, and it is natural, that before we separate—before they depart from under our care—that we should wish to speak and advise with them. When the son is about to go away from the father, under whose care and

training he has been brought up, to do for himself—to put in practice the instruction he has received—the father is wont to call him to him and to say: “My son, be strong, be brave, be true.” Now, we this evening, in accordance with the usual custom, would like a word with you, even if we said no more than this.

Having had conferred upon you the degree of Doctor of Medicine, whether you all deserve it or not, you are in time to come to be regarded as physicians. But what is the true ideal of a physician? It would be curious, if it were possible, to look into the mind of each one of you and learn in what light each regards the physician. With one it may be, but I hope such is not the case, and I do not believe it is, that the physician is a vender of pills, powders, and lotions to those who desire such stuff for real or imaginary ailments—that the physician has something to sell at a market price—that his success will depend mainly upon his stock of medicines, the cunningness of his compounds, and the skill he is able to employ to bring their real or pretended merits before the attention of the public. With another, who takes a little higher view, the physician is a very respectable gentleman, who charges a fee for being consulted for pains and aches, and who visits the sick at their homes, when necessary, and prescribes for them for a money consideration—in other words, that the physician, although occupying rather a higher plane than the mere vender of wares, is, after all, only a person of more or less respectability who earns a living by his services. As all men must give something in return for what they eat and for what they wear, so a physician is merely a gentleman who gives his professional advice for these things. Others of you, however, and indeed I hope all, will have for your ideal of the physician, one whose great aim is to be of service to his fellow man. In a commercial sense, he has nothing to sell, nothing to barter. He is to have his living for the benefits he bestows, and even to spare, although that seldom happens; but his labor is not a mercenary one no more than that of the minister of the Gospel who expects to be fed and clad in decent attire from the bounties of those to whom he imparts his messages of truth and love.

The physician has been defined “to be one whose profession it is to prescribe remedies for diseases.” Yes, treating diseases is the office of the physician, but it is only a part of his office. It alone would be a high calling; for what will not a man give

to be freed from it when racked and tortured with pain? But a physician does more than that—he administers not only to the body diseased, but to the mind diseased. He has to do with the passions, feelings, and emotions; and, in fact, as we propose to show as we proceed further on, he is almost the only one who possesses the knowledge requisite for fully understanding man's moral nature—almost the only one competent to become an effective reformer. This fact is beginning to be understood at the present time, but is not as fully appreciated as it will be in the future. The Doctor's duties are wide in their extent—so wide indeed as to embrace very much that relates to one's physical and mental welfare—a very great deal that concerns a person's happiness in this world if not in the world to come.

To the physician it is due that insanity is now recognized as a disease, and that it is not to be accounted for by an evil spirit taking possession of the body. So far as the phenomena of deranged mind reach, the battle has been won and the victory is complete; no one whose opinion is of any value pretends now that deranged phenomena are anything more than the deranged functions of the supreme nervous centres of the body. Before the time of Pinel, the lunatic was believed to be possessed of a devil; and it was the natural result of such a view of insanity that men should treat him whom they believed to have a devil in him as they should have treated the devil could they have had the good fortune to lay hold of him. “The tortures which the insane suffered from the devils that had entered into him were less than those inflicted by the devils who took charge of him. When he was not put to death, he was confined in a dungeon, where he lay chained on straw; his food was thrown in, and the straw raked out through the bars; sightseers went to see him, as they went to see the wild beasts, for amusement; he was cowed by the whip, or other instrument of punishment, and was more neglected and worse treated than if he had been a wild beast. Many insane persons, too, were without doubt executed as witches, or as persons who had, through witchcraft, entered into compact with Satan.” But how different is it now in the condition of the insane we learn by viewing the palatial structures supplied with every comfort, built at the present time for the treatment of those who have lost their reason, four-fifths of whom who enter are returned to their families and friends restored to

their right minds. And all this is due to what? To advance in metaphysical science? By no means. "Suffice the fact," as a distinguished writer says, "that philosophy which had mounted so high was for a time sunk so low beneath the waves of superstition and ignorance that it might well have never been in existence. And when at last a revival of learning took place, things were little better; empty scholastic subtleties and metaphysical mysticism engaged the whole attention of men, who rivalled one another in verbal disputations, without agreement in the meaning of the terms they used, and in blind worship of the authority of Aristotle without real regard to the true method of his philosophy, or to the facts with which it dealt. As if knowledge were nothing more than a process of ingenious excogitation; they made no attempt to observe the phenomena of nature, and to search out the laws governing them—wherefore philosophy was little more than a web of unmeaning terms and of empty metaphysical subtleties." Philosophy as it then was, and is to a considerable extent now, which deduced the simple out of the complex, instead of pursuing the inductive method, and forming the complex out of the simple, could not understand the operations of the mind and the relations which it bore to the physical system; but made the mind into an entity independent of the body in all respects, not even being liable to be modified in its actions by it.

Was this humane change in the treatment of the insane in any way due to the fact that men had become better? Not at all. Religious enthusiasm existed to a greater extent then than now. Probably at no time in the world's history were men so anxious to fulfill the divine will as at that time. But a religious zeal not guided by knowledge is as apt to work evil as good. And although the object of the Gospel is to teach the fatherhood of God and the brotherhood of man, yet if a philosophy is accepted that defines the soul, which revelation has taught us that we all possess, is something that it is not, it will be brought about that religion will overthrow its own purposes. If science is able to determine what the soul is of which the Bible speaks, it rather points to man's consciousness which is truly the *ego* which accompanies him from childhood throughout his whole life, and not to the mind as made up of reason, judgment, and the emotions, which are not the same to-day as yesterday, and still less the same as when we were little children.

It was reserved for medical science to disclose the fact that an unsound mind is the result of an unsound body—that as the organism is deranged or modified so are the forces belonging to it—that evil spirits in the abstract taking up their abode in the body is a fallacy. In other words, it was physiological and pathological knowledge that taught that the raving maniac who tears himself and unconsciously injures friends and foes alike is a brother still, only laboring under disease; and it is the same knowledge that teaches that the fallen man and woman are our brother and our sister, the victims of a faulty constitution which they are not able to help. Religion softens the heart and points to God as the great author of all things, but the light of science is needed to direct its fervor by knowledge.

“By grace ye are saved.” “By the grace of God I am what I am,” every good man says. In other words, no man should boast himself of a merit, or despise him who does not possess it, for in either instance he has generally been but a passive agent. These things, gentlemen, it is in your province to teach; for you have learned them from your study of medicine as much so as you have learned how to prescribe remedies for mere physical ailments; and if the latter knowledge is to be made use of in the good you are expected to do to your fellow men, you should also feel under obligations to employ the other for the same purpose, for it has been as legitimately obtained in the way of acquiring your profession. If medicine teaches anything it teaches that the character of an individual depends largely upon his physical constitution as modified by surrounding circumstances, and that in consequence a man is not to be held in all cases responsible for the bias of his disposition. If, because the “fathers have eaten sour grapes, therefore it often is that the children’s teeth are set on edge”—if, because the “fathers had stoned the prophets, therefore it was that the children rejected Him who was sent unto them,” is it not proper, seeing that certain conduct on the part of parents results in particular propensities in the children, that our indignation should be somewhat stayed against those who are habitually guilty of wrong doing, and that they should not always be pursued with the severe penalties of the law? I believe that you will think with me that much allowance is to be made for such on the ground of a faulty organization; and if you will feel under obligation

to disseminate the knowledge of this fact you will do much towards stemming the great flood of immorality and crime that is spreading over the land, and confer a great boon on society. Affording the knowledge, then, upon which the reformation of common offenders is to be based is legitimately a part of your duties.

Civilization, enlightenment, refinement, culture, wealth are from year to year increasing, and yet vice and crime exist none the less. In fact, they seem to be more prevalent than ever. Penitentiaries, jails, and work-houses are built every year and are filled with inmates; the preacher preaches and inveighs against the evil; the philanthropist busies himself in doing good; and yet there seems to be no lessening in the monster's power—the question, “what is to be done,” is as prominent as ever. Prisons appear to affect nothing—the criminals and vicious of the lower class pass their whole time in vibrating in and out of them; while the more respectable ones escape them to prey upon their friends—the minister is scoffed at and mocked, or, if heeded now and then by one, the chain which is bound around him weighs him down and prevents him from accepting the conditions which are made him of salvation, to depart from evil—the philanthropist's charity is consumed with only the result of having the hand extended for more. In spite of all that is done in the way of moral reform, the question remains unanswered.

Great as the light is which science has thrown upon the causes of vice and crime, yet those who have to deal with them seem to heed it but little. The cause of this are the errors taught by a bad philosophy, and these must be gotten rid of if we are ever able to cope with the evil. If the trammels of prejudice could be thrown off, and the facts which are disclosed recognized, it would be better for religion and humanity. Notwithstanding the mountain of evidence that goes to establish it, yet it is continuously overlooked that, as an eminent psychologist says in last August number of the *Lancet*, “of some criminals, as of some insane persons, they are born not made; they go criminal, as the insane go mad, because they cannot help it; a stronger power than they can counteract has given the bias of their being.” This same thing has been declared a thousand times before, and I made it prominent in almost the same langu-

age in a paper I read before the Cincinnati Academy of Medicine. The same writer continues to say: "Moral philosophy may make its hard and fast lines, and lay down abstract propositions concerning the power of the will in the conduct of life; but, when we have to do with concrete cases, it is plain that no such definite lines can be applied, and that the abstract propositions are only true of a certain proportion of mankind."

Strong confirmatory evidence of this proposition is contained in a paper read before the Dubuque Meeting of the American Association for the Advancement of Science, August, 1872, by J. W. Foster, LL.D., on the Crania of the Mound Builders; and yet the author was not discussing any philosophical question, but was only stating the results of observation, without the design of proving anything by them. He says that it is the preponderance of the brain case over the facial portion of the head that gives to man his superiority as compared with the lower animals; and that we estimate the intellectuality and capacity for improvement in the several races of men by the same standard. From the types of their skull, therefore, he judges that the pre-historic Mound-Builders were a mild, inoffensive race, who would fall an easy prey to a crafty and cruel foe; but secure from the irruptions of enemies they would, in time, develop a rude civilization. Our Indian, on the contrary, possesses a conformation of skull which clearly separates him from the Mound-Builders. And such a conformation must give rise to different mental traits. His character since first known to the white man, has been signalized by treachery and cruelty. He repels all efforts to raise him from his degraded position; and whilst he has not the moral nature to adopt the virtues of civilization, his brutal instincts lead him to welcome its vices.

Can it be possible that the man who spends twenty out of thirty years in prison, and during the ten years he is free lives in a constant state of alarm—hid away during the day and skulking through alleys and bye-ways at night, frightened at every sound—is in his right mind in pursuing the life he does, as we understand the mind to consist of the intellect, the emotions, and the will? Is it not evidence of a well-balanced mind when an individual consults his own welfare, at least his welfare in this world, and yet does this man do it? Does not his intelligence tell him, for we find him oftentimes highly capable of reasoning, that honesty is

not only the best principle, but is the best policy—that in following it is happiness—that in departing from it is misery and degradation? Yes, it does; and yet he proceeds right on in his criminal course of life.

Attend upon the sittings of our city police court day after day and see what will be revealed to you. Will you notice at all times new faces of the many men and women that are arranged before the judge, and who receive sentences to the work-house of thirty days, sixty days, and ninety days? On the contrary, you will discover that there is a large population of this city who spend their whole lives revolving in a circuit of in the work-house, out of it, in the station-house, and back in the work-house. Now is it probable that the sort of life these people lead is a matter of *deliberate choice* with them—such a choice as we feel we make, when we make a selection out of things to choose from? If so, is it not strange that they should choose so diametrically against their own interests, and not only theirs but the interests of society? Is it not more reasonable to presume that the poor creatures are controlled by a fault of organization they cannot help—a fault that carries them along captive in spite of themselves, so that when they would do good evil is present with them?

If science has proven any thing in any of its departments, it has proven in the department of medicine that moral strength, as intellectual power, has its source in organization. There are moral idiots as there are intellectual imbeciles; and there are those whose will is *nil*, and was never anything but *nil*, and who are always lead captive by the last enemy. He who has no sense of right, and there are many such, the congenital deficiency oftentimes being very conspicuous in childhood, can not be expected to do right. As well might you expect the leopard to change the spots on his skin as to expect a man to follow in the course of a duty he does not feel. And as preposterous is it to suppose that any one will successfully resist temptation to wrong doing who has no volitional power. That vice and crime are frequently the result of a faulty conformation is evident from the fact that they are often hereditary. In consequence of this no intelligent physician will adopt into his family a child whose parents he does not know to be correct people. Morel relates the history of one family which may be

adduced as a typical example of the course of degeneration proceeding unchecked, and which may be summed up as follows :

First generation—Immortality. General viciousness.

Second generation—Viciousness in some. Affection of mania in others.

Third generation—Some were affected with hypochondria ; others had lypemania.

Fourth generation found but one member of the family left, a female, who had feeble intelligence. Became attacked with mania at 16, which passed into complete idiocy. With her the family became extinct.

The hereditary kindship which is sometimes traceable between crime and insanity was illustrated in a recent number of the *Lancet* by the case of Christiana Edwards, which excited so much interest in England a few months ago. This woman, we are informed, was convicted of murder and afterwards reprieved. Her father died raving mad in an asylum ; her brother died epileptic and idiotic ; her sister suffered from mental excitement, and once attempted to throw herself out of a window ; her mother's father died paralyzed and childish ; a cousin on the same side was imbecile ; she herself had been subject to somnambulism in childhood, and finally had an attack of hemiplegia ; and at the time of her trial her face, drawn to one side, showed the effects of the hemiplegic attack from which she had suffered.

In the same article another example is given, showing the effects of crime in one generation of a family upon the mental organization of the following generations—showing, as is very truly stated, “ how the sins of the fathers are visited upon the children unto the third and fourth generations.” While the Reign of Terror was going on during the first French revolution, an innkeeper profited by the critical situation in which many nobles of his commune found themselves, to decoy them into his house, where he was believed to have robbed and murdered them. His daughter, having quarrelled with him, denounced him to the authorities, who put him on his trial, but he escaped conviction from lack of proof. She committed suicide subsequently. One of her brothers had nearly murdered her, on one occasion, with a knife, and another brother hanged himself. Her sister was epileptic, imbecile, and paroxysmally violent. Her daughter, in whom the degenerate line approached extinc-

tion, became completely deranged, and was sent to an asylum. "Here, then," the writer says, "is the sort of pedigree which we really want, if we are to judge of the worth of a family, the hereditary line of its vices, virtues, and diseases." And you will perceive, gentlemen, that the best criterion to judge of a family's worth are the virtues of its members and their freedom from vice, and not its wealth. You who are candidates for matrimony take notice.

In the *first generation* of this family there was acute intelligence with absence or destruction of moral sense, as shown by the acts of murder and robbery.

In the *second generation*, two members commit suicide, and a third attempts murder.

In the *third generation* there is but a single member remaining, who becomes affected with mania.

I could recite to you many other examples of the transmission of intellectual traits and moral biases from parent to child in the way of showing to you that character is the result of constitution, but it is unnecessary as other examples will suggest themselves to you. Says Dr. Maudsley: "Power which has been laboriously acquired and stored up as statical in one generation manifestly in such cases becomes the inborn faculty of the next. . . . It is not by limiting our observations to the life of the individual, who is but a link in the chain of organic beings connecting the past with the future, that we shall come at the full truth; the present individual is the inevitable consequence of his antecedents in the past, and in the examination of these alone do we arrive at the adequate explanation of him. It behooves us, then, having found any faculty to be innate, not to rest content there, but steadily to follow backwards the line of causation, and thus to display, if possible, its manner of origin."

Says the same author whom we have just quoted: "The causes, course, and varieties of moral degeneracy are then not merely subjects for the moral philosopher or the preacher; but they are proper subjects for positive scientific inquiry. And, if they be so investigated, it is not unlikely the results may throw some light on the vexed question of the nature and origin of the moral sense. Now if there be a class of persons who are without the moral sense, who are true moral imbeciles, it is the class of habitual criminals. All observers who have made them their

study agree that they constitute a morbid or degenerate variety of mankind, marked by peculiar low physical and mental characteristics. They are scrofulous, often deformed, with badly formed angular heads; are stupid, sluggish, deficient in vital energy, and sometimes afflicted with epilepsy. They are of weak and defective intellect, though excessively cunning; and not a few of them are weak-minded and imbecile. The women are ugly in features, and without grace of expression or movement. The children, who become juvenile criminals, do not evince the educational aptitude of the higher industrial classes: they are deficient in the power of attention and application; have bad memories, and make slow progress in learning; many of them are weak in mind and body, and some of them actually imbecile. At the end of the best part of a life spent among prisoners, a prison surgeon declares himself mainly to be impressed with their extreme deficiency or perversion of moral feeling, the strength of the evil propensities of their nature, and their utter impracticability; neither kindness nor severity availing to prevent them from devising and doing wrong day by day, although their conduct brought on them further privations. Their evil propensities are veritable instruments of their defective natures, acting like instincts, in spite of reason, and producing, when not gratified, a restlessness which becomes, at times, uncontrollable. Hence occur the so-called 'breakings-out of prisoners,' when, without apparent cause, they fall into paroxysms of excitement, tear their clothing and bedding, assault the officers, and altogether behave for a time like furious madmen."

An acquired faculty in one generation becomes the inborn faculty of the next; *i. e.*, a faculty or bias of character that has been formed by circumstances under which the individual has been placed leading to the same line of conduct repeatedly, is transmitted to the next generation as an inheritance. It is known to every one, as I wrote in an article published some time ago, that an act which is disagreeable to commit at first, and therefore difficult, becomes by repetition much less disagreeable and much less difficult in its execution. In fact, in many instances, its commission, by frequent repetitions, will become a pleasure, and the judgment in regard to it will undergo a change; for it is notorious that the feelings powerfully influence our reasoning. Now what are the causes which bring about such a result? We

reply that they must consist in changes produced in the structure of the brain. It is now admitted by all physiologists, for it is shown by the excreta, that every thought, every intellectual operation, is followed by changes in the material substratum; that every mental phenomenon is the result of some change, molecular, chemical, or vital, in the nervous elements. Particular mental phenomena, therefore, resulting from the retrograde metamorphosis and repair of cerebral tissue from the same causes operating for a long time, cause the structure of the substratum to be more or less permanently affected, and to obtain a peculiar character. This explains the thorough demoralization which we sometimes witness in persons whom, in times past, we have esteemed for their correct morals. Acts of wrong doing indulged in will oftentimes bring about a change of character by repetition, and may eventually sink a person in the depths of immorality where he will be helplessly the prey of vices; and what is still worse entail a vicious bias of character upon his children and children's children, till his family is blotted out of existence, unless, peradventure, some are saved as brands from the burning by a merciful Providence surrounding them with conditions that will tend to keep in abeyance their morbid propensities, and develop their better traits. How preposterous, therefore, is it for any man or woman to presume that he may trifle with his own moral nature, and his children that he may beget will be shielded from any evil influence providing he conceals his immorality from them. The psalmist, ignorant of physiological laws, uttered a truth through inspiration which science, after the lapse of several thousand years, has established, when he declared that the seed of the righteous should not be found begging bread. The seed of the righteous has necessarily inherited a character of integrity and industry; and it is impossible for one of such a character to come to want. The declaration is founded on sound philosophical principles.

Since the preceding part of my address was penned, I have received the *Lancet*, of London, of Jan. 18th, in an editorial of which, treating of crime, are some remarks pertinent to what I have said, and which I will quote:

"If among any body of the community hereditary transmission of physical and moral attributes is conspicuous, it is among the population which fills our jails. Look at its general physique.

Imperfect cranial development, with its concomitant of feeble cerebration, amounting to almost a retrogression in the direction of the brutes, is apparent in the mass of its members. Intellectually and morally they are imbeciles, intelligence being replaced by cunning, and the will reduced to its elementary form of desire. In the struggle for existence, they herd together, deriving constant accessions from the degenerate of the classes immediately above them, and perpetuating themselves amid conditions most favorable to the reproduction of their like. This is not theory. At a late meeting of the Medico-Psychological Association, evidence was adduced to show that the 'criminal classes constitute a persistent factor in the community, inheriting and transmitting peculiarities, physical and moral, which induce to crime with the force of gravitation.' Forty years' experience of the county prison at Perth enabled Dr. BRUCE THOMPSON to confirm this observation, and to suggest means for removing, or at least for modifying, the evil to which it points.

"Those means are almost identical with the method proposed by MR. GALTON. First break up the class. Remove its constituent members to as great a distance from each other as possible. Place them under conditions most favorable to the counteraction of their inherited tastes, propensities, and habits. Such in the general principle at the root of reform of criminals. Its *modus operandi* for individuals must be left to the prison congresses to devise, improve, and perfect. As at present treated, the moral disease of crime is pestered by conditions under which its cure is attempted. The evils of 'hospitalism' have more than their counterpart in those of 'carcerism.' The moral atmosphere in which the criminal patient lives and moves is even less conducive to recovery than the material atmosphere in which the physical patient has his being."

But, gentlemen, I have spoken to you on the subject of morals as long as the limited time allowed me to speak will permit. The subject is an exceedingly interesting one, and is worthy to be dwelt upon at length, but what I have said must suffice on the present occasion, although there are a good many points that I have not even touched upon. The very brief treatment of the subject, however, that I have given will doubtless be sufficient to show that the office of the physician has a far wider scope than the treatment of physical ailments—that he has to do

with mental and moral phenomena. But, say some, if the doctor is to give advice in morals, wherein consist the duties of the minister of the Gospel? In reply I will say that it is his duty to preach Christ and Him crucified. The Christian religion does not make morality a test, but faith in Christ; for if morality and vice result from good and bad organizations, as I have attempted to show, and which I think can be proven even if I have failed to do so, there is not much merit in one nor much demerit in the other; and an individual, therefore, who was saved, would be saved by no merits either of his own or of any one else. Nowhere in the New Testament are any promises made on account of morality. Religion inculcates morality, and the truly religious man, as the greater includes the less, will be a moral man, for the love of God and the love of man which are involved in religion necessarily leads to the discharge of every duty. But with our minds enlightened by the teachings of science, we will avoid acts of injustice done in the name of religion. How many times, indeed, have individuals, taken in a fault, from a faulty bias of character which they could not help, been expelled from a church organization as given up to sin, when, if a more intelligent view of their case had been taken, they would have been borne with more patiently, and their more fortunate brethren would have done more to help them to do right; for we all, some more than others, need one another's aid to do as we should do. It is a singular fact that Christ never uttered an anathema against common sinners. Even the woman taken in adultery he did not condemn; but sent her away, telling her to sin no more. And it was undoubtedly in reference to habitual sinners that he gave the injunction that forgiveness should not only be extended seven times but seventy times seven; *i. e.*, an indefinite number of times—as often as it should be sought for. It is as preposterous to presume that one with a congenital or acquired bias to evil can at once adopt a correct moral life, as it is to suppose that a cannibal of the Cannibal Islands can, as soon as he is brought into it, adopt all the manners and customs of an enlightened society. That morality is not religion is evident from the fact that strict integrity is not unfrequently found in unbelievers, while now and then we witness a man, whose piety we can not doubt, falling, like David, into grievous sins. But the latter man is a better man the former;

for while we find in his heart love, for which we all crave and seek after, in the other is to be found only justice—justice, which is very admirable in itself, but is much more so when attended with other feelings. But while religion and morals are distinct, they go hand in hand, pointing to the fact that the preacher and the doctor should work together for the benefiting and elevating of humanity. In the person of Christ both callings were combined—He both preached and healed—and in Him there was perfection in both. He taught truths which science is only beginning to disclose after the lapse of nearly two thousand years.

Right here permit me to observe, for it seems to be the most favorable place, that acting as powerful causes of vice and crime are poverty, attended with bad food, bad air, filth of person and surroundings; insufficient clothing; idleness, resulting from wealth and other causes; stimulating food and drink. But the present condition of society, more than any thing else, is to blame; for it deals unjustly with the sinner. It not only disgraces the victim, but continues the disgrace after reformation, especially with females, making them irredeemably outcasts. There might be some extenuation for this if it itself were pure, but we know that it is seething with concealed impurities. Society, as constituted, too, makes a wrong test of merit, which operates against morality. Position and wealth have more influence with it than intelligence or correct behavior, and, consequently, those emotional states have a tendency to be kept in activity; while others, which in their action commend the right and are emotive forces of correct conduct, remain dormant or are overwhelmed.

I will observe that those who are engaged in the work of reformation are laboring in a good cause. Science teaches that the vicious are more to be pitied than blamed—that they are poor, unfortunate creatures. It also points out how very many of them are to be saved—disclosing the fallacy of the systems which are generally employed, and teaching new and true methods; one of them, I think, in the case of habitual criminals, being to prevent their segregating by scattering them. We also see by its light that a general reformatton of manners must occur in a community if it should desire greater purity of character, and that the vicious and criminal classes should not be

re-enforced from it; for the present customs, in all the departments of life, not only tend to immorality in the present generation, but tend to fasten vice upon subsequent ones by the physical changes they produce being transmitted from parent to child.

Now, gentlemen, in concluding my rather lengthy address, permit me to make a few brief personal remarks. On separating from us, your instructors, resolve that you will cultivate the profession into the portals of which you have entered this evening. Remember that your profession is a noble one, second only to that of the ministry, and is worthy of all your powers. Do not be content to be a third rate, or second rate, but put forth your efforts to be first rate doctors. You cannot discharge your duty and keep a good conscience with any striving short of that. A man may be a third or second rate carpenter and be satisfied, for no doubt there is often work for such grades of mechanics in that business, but such is not the case in medicine—only a physician thoroughly versed in his profession has a right to prescribe in any case of illness. There is no coarse and fine work in the practice of medicine. It is all fine work. In every case we deal with life and health. Our prescriptions either do good or harm, and the harm is very apt to be irreparable, for we cannot make anything new like the carpenter when it has become evident to him that he has made a mistake. The effects of the simplest medicine, improperly administered, are sometimes highly disastrous. A few drops of paragoric, given a babe to hush its moanings, as it has rolled its head about in pain, has often hushed it in death.

The law, I believe, requires that a physician shall be sufficiently versed in his profession to give his patients the best modes of treatment known. Now to fulfill even the requirements of the law, it will be necessary that you waste no time, for progress is making rapid advance. Old theories are being replaced by those nearer the truth; better remedies are being discovered; old ones are being put to new uses, and improvement is going on on every hand. No physician can practice medicine now who is not constantly making use of the thermometer, urinometer, ophthalmoscope, microscope, laryngoscope, etc. etc. A few years ago probably not one physician in a dozen ever saw a microscope, much less looked through one; but the

one who is now not calling upon its aid almost daily is justly regarded as neglecting a most important means of diagnosis.

You can feel assured that the best wishes of the Trustees and Faculty will go with you as you leave these walls. We will always take an interest in your welfare, and will feel pleasure in your prosperity. Identified as we are with you, your advancement in your profession we will regard as reflecting credit upon ourselves; and thus sharing, as it were, in the honors that may fall to any of you, we will surely desire that you may attain to high positions. But in order for you to accomplish that, it will be necessary for you to follow in the ways of rectitude, and that you be diligent in the cultivation of your profession. Industry and correct behavior will sometimes elevate a man higher than talent alone.

We all hope that you will keep in remembrance your *alma mater*. If the institution shares in the honors of its graduates, so do the graduates participate in its honors. It is no mean recommendation by any means to be a graduate of a school well known for its numerous and proficient alumni. Now you can do much towards increasing the goodly reputation which our college already enjoys by sending here, from year to year, to be educated in medicine, such young men as you have reason to believe from their natural and acquired endowments will make creditable physicians; and we sincerely hope that you will do so. The lower rooms in the medical profession, as it is with the lower rooms of all the other callings in life, are overcrowded, but in the upper apartments there is still room and to spare for new comers, so that you need have no conscientious scruples against advising young men of education and ability, who are inclined that way, to study medicine, for fear you may aid in crowding still more an already too crowded profession.

And now, gentlemen, permit me to wish each one of you a long, happy, and prosperous life.

NOVEL METHOD OF DETECTING SMALL-POX—An Italian physician can detect the presence of variola before the appearance of the eruption, by an itching on his forehead and chin! He has verified the statement by a number of observations, and his assistants also confirm it by their own experience.—*Pacific Med. and Surg. Journal*.

THE FIVE SENSES, OR THE UNITY OF SENSORY NERVE ACTION.

By J. H. WILLIAMS, M. D. Read before the North Western
Ohio Medical Association, at Lima, O.

While it is universally believed and taught that there are Five Senses, arising of course from as many kinds of nerve action, each having its own distinct influence, we undertake to show in this article that there is, in fact, but one kind of sensory nerve influence or action that produces the phenomena arising from the Five Senses. Were the tissues all alike, as skin, muscle, etc., that these nerves supply, and the nerves themselves of different origin and structure, then it might be reasonably supposed that their action would be different, and thus produce different results. But this is not the case; they all arise from ganglions, essentially alike in structure and properties; and that, too, throughout the whole cerebro-spinal tract. In a word, they are of like origin, like action, and like termination: that of a bulb or corpuscle; but supply unlike tissues, hence the difference in their phenomena. To illustrate:—The fifth pair of nerves is not only a nerve of *common* sensation, but also of *special* sensation and motion. Its sensory properties are derived from the casserion ganglion, and its motor from the pons varolii. There is no difference whatever in the branch that supplies the tongue—the gustatory—and those that supply the integument of the head and face; yet the former is called a nerve of *special* sensation, while the latter belongs to that class of nerves known as nerves of common sensation or feeling. Thus by the *same* nerve we taste and feel; and, by means of the same bulbous extremities of the gustatory, we *taste* the metal of the needle, and *feel* with pain its piercing point.

Taste is therefore but a modified term for feeling, for we feel the sensation produced by the action of a foreign body on the tongue, thus supplied by a nerve of common feeling that conveys sensation and pain to the brain. The difference is, therefore, not in the nerves, but in the tissue they supply; one being the tongue, and the other the integument, etc.

Again, we have a branch of this same fifth pair—the ophthalmic division—performing the special office of smell, in connection with the olfactory proper; the latter being distributed to the

superior and middle turbinated bones and upper portion of the septum nasi, while the former, the fifth, supplies the remainder of the nasal passage. This ophthalmic branch of the fifth, that so often becomes extremely painful (neuralgia), performs the same office that its fellow of the lingual does the tongue. They appear not only to perform the functions of common sensation, but also that of special sensation. They are like the spinal nerves in having motor-filaments in the same sheath with the sensitive, at the place of origin. Indeed, it is well known that *all* the nerves of special sensation, so-called, have, like the spinal, corresponding motor nerves, or filaments, that respond to sensation. Is it not, then, reasonable to suppose that these phenomena (tasting and smelling) are more, if not exclusively, the result arising from form, texture, vascularity, etc., of the tissue, than from the nerves which supply these parts? and that special sensation is merely a modification of common sensation or feeling arising from the causes above stated?

Again, hearing is the sensation conveyed to the brain by the ganglionic nerve portiomollis, caused by the wave action of the atmosphere. We express this feeling or sensation as that of sound or noise, but it must be remembered it is a sensation only, for there is no such thing in nature as noise or sound. The peculiarity of the action of this nerve, doubtless, arises from the form, character, etc., of the tissue it supplies, for it is like the other nerves of its class in retaining sensation after the cause is removed, its limit of perceiving distinct impressions, and of its capacity, like nerves of common sensation, of improvement by education, attention, and practice. It is also like the other nerves of general and special sensation in being compound in its action by having motor filaments that respond to sensory action, which it receives from the seventh or facial.

This, as before remarked, is characteristic of all the cerebro-spinal nerves. For a flood of light cannot be poured in upon the retina without the immediate action of the motor ocular in drawing a curtain (the iris) over the pupil, to cut off the excess of sensation that gives pain and obscurity to vision. So also has the sense of taste and smell their motor guards that immediately respond to over-sensation, for the purpose of protecting them from injury.

But further with regard to the sense of vision; it is nothing

else than a a sensation or feeling caused by the impression of a foreign body, by means of light, that imparts sensation to the apoenurotic filaments of the optic nerve (the retina) which also arises from a ganglion (the quadregemina) and terminates like all the nerves of common and special sensation with a bulb or corpuscle. Thus by the retina we *feel* the sensation of the object, as we feel the clothing on our backs, and thus obtain a knowledge of its size, form, etc.; so does the blind person, through the feeling of touch from common sensation, obtain a knowledge of the same object, even to color itself.

Thus the five sensations, so-called, are actually the result or production of but one common sensation or feeling; that is, the action of all ganglionic nerves are essentially the same in sensation or feeling, as much so as the non-ganglionic are that of motion; and also that the difference in their phenomena is the result of the different form and tissue structure of the parts supplied by these nerves.

The laws of nature are simple in character, when rightly understood, and are divested of mystic complications, however great and sublime the phenomena they produce. But human wisdom has too often perverted her character in this respect from being rightly understood, and thus marred to a certain extent their inexpressible grandeur and sublimity. We see order, beauty, harmony, and design displayed in the great and varied phenomena before us, in all organic matter, and yet they are all the result of a simple law that governs life, and growth, and death. Can it be possible that the organic history of man, animals, and plants is the same? Yes; for when we look upon the humble herb, in its growth and bloom, the harvest-crowned fields of ripening grain and the towering oak, whose boughs are wont to skim the clouds, or as it lies with prostrate trunk, mouldering back to dust; or upon the slimy worm of earth; behemoth of the floods: and all of animal life to that of exalted Man, we see they have one common origin: a simple cell with its vital germ or living speck, that grows by the same law of nutrition, completes its course in life, and dies, to return again to earth. Why then should Nature depart from her law of simplicity, and make five or more varieties of sensory nerves for as many varieties of tissue? This she has not done; but has presented to our view a varied phenomena as the result of a

simple cause, which, when rightly understood, are highly calculated to lead the contemplative mind to the admiration of Him, their Great Original, who hath in wisdom made them all.

PROGRESSIVE MUSCULAR ATROPHY.

By B. TAUBER, M. D., Paducah, Ky.

Mrs. L., æt 65, has sent for me, July 20th, to examine her arm and shoulder. Some physicians, in Memphis and in this city, diagnosed the case a few months ago as rheumatism; they used liniments and alkalies ad libitum, with no beneficial results.

She complained of loss of strength in the arm and forearm, hand, and shoulder; severe pains, simulating those of neuralgia, in the parietic muscles; slight twitching of separate bundles of muscular fibres; locomotion in any direction lost; and showing distinctly in the hand the "main en griffe" of Duchenne.

On examination I found, as usual in this disease, the thenar and hypothenar eminences almost disappeared; the skin was hanging over them in loose folds; the muscles of the arm and forearm atrophied—unable to perform the complex movements; the deltoid muscle and shoulder flattened; also the trapezius and scapular muscles.

As the symptoms are so well marked, I diagnosed the case "progressive muscular atrophy," and applied fifteen Smee's cells to the spinal cord and to the sympathetic nerves; to the cord ten cells for about ten minutes, and to the sympathetic nerve five cells for about five minutes every alternate day. I also applied the induced current (A. Gaiffe's) directly over the atrophied muscles, to improve the nutrition of the same. To my great surprise I noticed after the sixth application the patient was free from pains; the voluntary movements almost natural in any direction; the lady was able to dress the hair, and to lift the arm in any desired direction.

For internal treatment, being anæmic, gave—

R	Quinæ Sulph.	3 ss.	
	Tr. ferri. Chloridi,	3 iii.	
	Strychniæ Sulph.	gr. ss.	
	Syr. Simp.	3 jss.	
	Ol. Anisi,	gtts. iii.	M

S. A teaspoonful three times a day after meals.

Also ordered to use the interrupted current every other or

third day. The lady since in good health; the arm increased in fulness, free of pains, and she is well satisfied.

SOCIAL EVIL.

In the first number of the *Lancet* commencing with this year, we published an article on what we believed to be "*The only practical means of limiting the spread of venereal disease*," to accomplish which sanitary end we suggested measures—some original, some tested by experience,—and which, when put into operation, would surely bear with restraining power on the "social-evil question," thus achieving another benefit. At that time a bill was pending before the Legislature, and we hoped to contribute our mite toward the accomplishment of what was believed by us to be for the sanitary, as well as moral, good of a large class of our population.

We suggested as a means of prevention of the diseases under discussion: *first*—registration in order to gain access to the afflicted; *second*—medical examination in order to recognize at the earliest stage any developing seeds of the most loathsome disease with which we have to deal; *third*—quarantine or isolation to prevent the spread of an infection eminently contagious, as is universally practised with other plagues, and to enable our profession to study more minutely, and under the most favorable clinical auspices, a disease which for years has baffled it, and by means of which study greater benefits would accrue to the multitudes yet to suffer, innocent or guilty; *fourth*—the exactment of a license and examining fee from those to be benefitted by the enforcement of the law, in order that the expenses of whatever kind resulting from the luxury, might be defrayed by the participators of it, instead of being a heavy burden on the community at large, as at present; and, *fifthly*—we considered that the operations of the law would tend to diminish—not entirely suppress prostitution—and thus indirectly aid us in our sanitary work.

The opinions we held in January we hold in December greatly strengthened.

We believe that we hold them in common with any medical man who has been able to lift his ideas above the fact that people will copulate, some before marriage, and others outside of the marriage bed; that a disease almost necessarily results; and that merely closing one's eyes in its presence does not remove it, or prevent new cases; and that the fact that it is the result of sin, and might be considered as retributive justice, does not absolve us from our duty to attempt its cure and eradication, or free

innocent posterity from its liability to be visited with the sins of its fathers.

Far from imagining that we can suggest the best means for preventing the spread of venereal disease, or restraining prostitution—still farther from condemning those who honestly differ from us *after attempting a solution* of the question, we only offered our suggestions embodying the result of a not limited experience with venereal disease, and our observations as to the working of a restraining law over a by no means small number of people, and in different countries. We have no respect though for those wonderfully upright specimens of humanity, whose natures^e are too sensitive to allow them to descend to the common every-day vices around us, who, because they have always thought *one way*, are too fossilized or rusty to imbibe new ideas the result of modern investigation, and who complacently praise God that “I am not as other men are,” while not hesitating to pocket the fee from a venereal sufferer, the victim of “retributive justice,” earnestly hoping that the other participant in the crime may come in also for treatment.

As we expected, the proposed bill was violently attacked, and its authors and aiders discourteously treated by those from whom they should have had support. The language used in condemnation of professional men, the equals in experience, earnestness and honesty of the authors of the libels, was at times disgraceful and false. The bill failed, but we hope to see it again brought up. The *Lancet* is the friend of any measure that will tend to assist the unfortunate. One great objection to adopting any system of registration in the United States was, that it was a European vice, and, if calculated for foreigners, was totally unsuited for Americans. We had at that time no need to go beyond Sanger’s “History of Prostitution” to prove the absolute necessity for a restraining law here, but now we have convincing proof from an American experiment, but in its infancy when the previous article was written, now grown mature after twenty months of close observation and rigid enactment. We refer to the St. Louis experiment. In addition to the voice of the Mayor of that city, as quoted in our October issue, we have before us the “Eleventh Annual Report of the Board of Police Commissioners of the City of St. Louis, for the year ending 31st of March, 1872,” and which includes the very complete and able report of the Chief of Police of that city. From this pamphlet we propose to quote freely to convince any person capable of reason that in an American city, American laws can regulate satisfactorily American prostitutes, and cause a marked diminution of the venereal disease in American citizens.

The original act intended to judiciously control and “lead to the repression, diminution and ultimate extinction” of this particular vice, was passed in July, 1870; it was amended in July,

1871, and the report before us comprises a period of twenty months. The act provides for the complete registration of every woman known to be a "bawd, courtesan, or prostitute," as well as of the persons keeping or *owning* the houses used for purposes of prostitution (Sec. 1). It also requires every private or kept woman occupying private rooms to be regarded as a brothel keeper, and to pay the "hospital dues" of ten dollars per month as well as the examining fee of one dollar per week (Sec. 3). Public women are forbidden, under heavy penalty, to "ply their avocation" in public; nor can they rent or inhabit any building without first having obtained permission from the Police Board. The act also provides for the erection of a suitable hospital for female venereal patients, by the collection of the following dues, viz.: ten dollars per month from each brothel keeper, and one dollar and a half per week from each courtesan as hospital dues, together with a fee of one dollar per week from the proprietor as an examination fee. The funds thus raised to be devoted solely to paying the expenses incurred by the operation of the act and to the erection and support of the above hospital, which is intended also to be a house of reformation (not penal), and its government and management to be in the hands of the Board of Health (Secs. 7, 8, 9). The next sections provide for the appointment of medical examiners, who shall have power to examine and inspect all registered houses and occupants once or oftener each week, to grant certificates, send to hospital, order arrests when disobeyed, treat diseases, etc.; for which they shall receive a monthly salary to be determined by the Board of Health, and they are forbidden to *receive any other pay or emoluments*, or to employ a substitute. Sec. 17 prohibits any courtesan from changing her residence to any other part of the city, without permission previously obtained, and *after* showing her card for the week with a certificate of good health. Secs. 22 and 23 provide for the removal of names from the register in case of reform, well established, and prevent the removal of the registered from the city without permission from the Board.

We have thus hastily mentioned the prominent sections in the act; the others provide for punishing, as misdemeanors, violations of its provisions, etc.

Now to turn to the able report of Capt. McDonough, we quote:

"Total registration of bawds by the police since the social evil law has been in force—

White bawds	-----	1,766
Colored "	-----	286
		<hr/>
		2,052

NATIONALITIES.

United States—White	1,378
“ “ Colored	286
Germany	139
Ireland	122
Canada and England	86
Scotland	12
Other foreign	29
	<u>2,052</u> ”

Next follows the statement of the registration on March 31, 1872, viz. :

“ White bawds	552
Colored “	151
	<u>703</u>

NATIONALITIES.

United States—White	393
“ “ Colored	151
Others, foreign	159
	<u>703</u>

“Total number of removal permits issued during the year was 5,622.”

The Chief notices a marked diminution in the number of women registered in single rooms, the decrease being 97.5 per cent. in one year; but he is aware that there are many evasions of the law, and that all are not registered.

“From the 25th of July, 1870, to the 31st of March, 1872, the period that it (the law) has been in force, 2,052 bawds have been registered by this department. From the 25th of July, 1870, to the 31st of March, 1871, the date of closing my last report, 1,284 were registered; since that date, up to the 31st of March, 1872, when the records of this year closed, the registration amounted to 703, or 581 less than the actual registration of 1871; a decrease of over 45 per cent. in 12 months.”

This reduction is, in a measure, accounted for by the fact that a large number of names of prostitutes have been stricken from the register. The Board of Health, on the advice of the medical examiner, having that power in cases in which an unmistakable desire to reform is manifested. The Chief recommends that this power be vested in the Police Commissioners rather, as experience has shown that the police can better judge of the genuineness of the intended reform. We again quote:

“I will recapitulate a few of the moral effects produced by the St. Louis social evil law in this city, which, in my opinion, far outweigh any moral objections which have been or can be alleged against it.

1. By this report it is shown conclusively that the number of public women have uniformly decreased each year.

2. That they are more decorous in their manner in public.

3. That the plying of their wicked trade upon the public streets has been almost entirely discontinued.

4. That a considerable number of abandoned women have been reclaimed and restored to respectable life; and, in several cases, married.

5. That clandestine, or private prostitution, which often develops into open vice, has been materially checked, through fear of the legal consequences of such indulgence, when brought home to the offender.

6. That juvenile prostitution has been greatly diminished, if not wholly removed. * * * That the results have so far been encouraging is beyond doubt.

"The most enthusiastic promoters of the measure could not have hoped for a larger or more beneficent success than has attended its workings during the two years in which it has been in force. * * * The young and the heedless have been warned by the police of the consequences of entering a life of shame. The number of bawds has largely decreased, and the deaths, formerly very numerous, in consequence of diseases concomitant on a life of shame, have, in a great measure, been prevented."

Now the Chief touches the point, in our estimation, which explains *why* the marked decrease in crime can be noticed. The italics are ours:

"Under the law, this evil has been removed, as it were, from the exclusive domain of the *moralist* and intrusted to *practical heads* and *practical hands* to give it shape and form, in order that, if possible, some good might result from a vice so stupendous and so mischievous; one which has existed and flourished in all nations and all countries from the time whereof the 'memory of man runneth not to the contrary.' St. Louis alone, on this continent, has grappled with the monster; and while it is not claimed that the authorities have suppressed it, or even expected to do so, nevertheless by the intervention of the strong arm of the *law* and strict *police surveillance*, it has been stripped of some of its worst features, and great reductions have been made in the ranks of its votaries, as you may observe from the records of this office, and which are a part of this report.

"These are cheering results that call for sincere congratulations from every lover of his race. The bold fact stands before the world, attested by abundant and conclusive evidence, that the supervision of this evil by the police does *not* tend to strengthen or confirm it, but to *deprive* it of its *principal terrors*, and, by wise and judicious action, to lead its victims to the paths of rectitude and right, and to their ultimate restoration to society."

It is the placing in *practical* hands any important radical measure that determines whether success shall follow its introduction. It will not tend to reform a prostitute to hear a Pharasaical brother pray in her presence—"I thank thee that I am not as other men (or women) are;" or to have an exceedingly virtuous sister turn up her nose at the sight of one on the street, or to visit a Magdalen Asylum, distribute tracts and tell the fallen to be honest and virtuous, when no attempt is made to *assist* in the effort.

The Chief now alludes to the Hospital provided for by the act. He says that in accordance with its provisions, there has been collected from each keeper of a bawdy house the sum of fourteen dollars per month, and six dollars from each of its inmates, and a sufficient sum has been raised to relieve the distresses and provide for the welfare of each of the unfortunates.

"It is estimated that not less than eighty thousand (\$80,000) dollars have been received in this manner. Deducting from this amount the sum of the expenses incurred in carrying out the provisions of the ordinance, there remains on hand, 31st March, 1872, a balance of nearly forty-five thousand (\$45,000) dollars."

After speaking of the "Industrial Home" contemplated in the act for the reformation of the women, the report concludes;

"In the effort to deprive the social evil of its most unsightly and revolting features, St. Louis has taken the initiative, and there is every reason to hope that her labors in that direction will be speedily brought to a successful and triumphant issue."

To repeat again the figures for the year, we have—

"Percentage of decrease this year.....	45
Total number of removal permits issued	5622
" " " permits granted to change res.	1874 "

We call attention to the enormous number of removal permits issued, which shows how distasteful to the worst cases were the operations of the law, and how they were obliged to go to other cities for more freedom. If other localities had the same law, what reflecting mind could fail to see the result? As the Hospital was not completed at the date of the report, we quote from a letter, dated 18th Nov., from Chief McDonough:

"The Social Evil Hospital and House of Industry, referred to in the report, is now in process of completion, and will comfortably accommodate one hundred and fifty patients when finished in January next; thus far, forty thousand dollars (\$40,000) have been expended on the property for the comfort of the fallen women who have monthly contributed to the *fund* now so generously being expended for their medical, social, and spiritual treatment; suffice to say that much good has resulted from our present system, and, since the founding of a permanent home, every success is promised for the future."

Now, we think the above quotations do conclusively prove that, in the American city of St. Louis, having, in a population of 2,052 prostitutes, 1,664 claiming to be born in the United States of America, an American law has so regulated their conduct and health that in twenty months the population has decreased to 703 in their ranks, leaving but 544 American women to disease American citizens, and all this in spite of the solemn assertion by one of our exchanges that "the movement (social evil law) belongs to the effete and vicious code of the old world," and a host of other equally absurd and false declarations.

We think it strange that the Board of Health does not enlarge on this subject, it being entirely under its cognizance. It may be that the ruling power in the Board is some enemy of the system, for the only allusion we find in its report is by Dr. Barrett, Health Officer, who states :

"As an indication of the beneficial influence of the social evil regulations, it may be stated that in 1870 thirty persons died of syphilis, while in the year just passed only nine persons died of that disease, which is a decrease of over two-thirds of the mortality from that cause."

Of course, all of the cases of venereal are not included in the above figures, nor can we suppose the deaths to be all enumerated. It is sufficient to say that *there is a decrease*, and as no cause is known by means of which the decrease can be accounted for in such a satisfactory manner as by the operation of the law, the presumption is strongly in favor of the law having caused it.

Now, the argument will be employed that the report so extensively quoted in this article *proves* nothing because written by a laymen, etc. That is just why we have used it as the strongest proof possible. It was asserted by us, in our article on the "Prevention of Venereal Diseases," that to exercise a sanitary supervision over those liable to contract the disease under discussion, would have the effect to restrain and control, if not suppress, prostitution, and thus in accomplishing a sanitary, we might possibly achieve a moral, good. On the other hand, the supporters of the Holland Social Evil bill, last winter, claimed that to regulate and control prostitution by police surveillance, would also greatly assist in lessening the disease arising from the vice. Thus each argument is sustained by the carefully prepared and authentic report of the officials under whose supervision the first attempt has been made in our country, and whose work has been so successful that we have no fear of its being abandoned. It was the placing the matter in the hands of *practical* men that gave it the hope of success.

Philanthropists (so-called) and enthusiasts would have stood idly by and *wished* it good; moralists (self-styled) would have prayed, if possible, to dodge the question—to not be defiled by it; impractical workers would have hoped the cause success,

and suggested to *others* how to act; but *men* faced the evil and demonstrated the feasibility of managing what they could not suppress, and mitigating an evil they could not avert.

We have no desire to touch the social evil question but in our efforts to prevent disease; we would escape it if possible and leave it to moralists, but it is so intimately associated with a large and important class of diseases that it is simply impossible to study them, particularly in a prophylactic or hygienic point of view, and not to be brought into collision with it. We therefore consider it our duty, as human beings, as professional men, as citizens, and as journalists, to war against the weak-kneed, the feeble-hearted, who would quietly stand and see the enemy approach without daring to resist. Yes, they do resist to a certain degree—they pocket the fees they can get from the unfortunates who are diseased, and thank God that they are not “as other men are!” As we advocate quarantine, Boards of Health, the collection of statistical data, and spread of science generally, so we also devote the *Lancet* to the advocacy of social evil laws, to the end that we may have less venereal disease and better facilities for studying the little we may have.

Let us hope that the supporters of the bill last winter will not fail in bringing forward their good measure again when our Legislature meets. It is a noble cause, and merits the success it will have when properly presented to the people who do not understand its merits, and who are now misled by the statements, false in every particular, of those who declare its advocates to be only those “broken down libertines” and “reckless married men,” “Americans who have been in Europe,” the “dissolute,” etc., while “every virtuous mind is against it.” Such a statement is an insult to the medical profession, and to every layman who sees the evil and dares grapple with it.—*The Western Lancet*.

THE SURGICAL TREATMENT OF ANEURISM.

By Prof. HOLMES, Royal College of Surgeons, of England.

In his lecture on “The Surgical Treatment of Aneurism in its Various Forms,” Prof. Holmes said that the conclusions justified by present experience as to the applicability of Brasdor’s operation in innominate aneurism appeared to him to be as follows:

1. That the distal ligature of the carotid alone, or in conjunction with that of the third part of the subclavian cannot be trusted to produce the complete consolidation of the tumor.
2. That the natural effects of the ligature of the carotid artery is to produce coagulation in that part of the sac directly connected with the mouth of the artery.
3. That this may suffice practically for the cure of the aneu-

rism when the subclavian part of the aneurism is small and shows no disposition to grow.

4. That in other cases where the mouth of the subclavian artery is previously obliterated by impacted clot, the ligature of the carotid only may effect a radical cure.

5. That for these reasons it is better, in any cases which appears to require distal ligature, to commence with the operation on the carotid alone, and afterwards to consider the propriety of securing the subclavian either in its first or third part.

As to the justifiability of operation on the first part of the subclavian, the Professor made the following remarks:

The ligature of the first part of the subclavian has hitherto failed, on account of the almost uniform occurrence of secondary hemorrhage. There are dangers in the operation, viz:—anatomical difficulties, and the possibility of wounding the sac, or of finding the vessel diseased. Still, most surgeons would allow that if the ligature of a large artery involved little or no risk of secondary hemorrhage, the operation might be repeated under similar indications to those which would justify any other operation of equal importance. The less or greater risk of secondary hemorrhage depends on the possibility or impossibility of securing an artery so as to obliterate without dividing it. Now, this has been an object with the surgeons since the first case in which John Hunter tied the femoral for popliteal aneurism; and the methods by which the attainment of the object has been attempted are the temporary ligature, the *presse artère* or acupressure, and the silver ligature. None of these, except the *presse artère*, has as yet afforded definite proof of success, and this only exceptionally.

A case lent by the College of Surgeons of Ireland, showing the obliteration of the femoral by this method for popliteal aneurism, proves, however, that an artery may be obliterated and an aneurism cured without division of the vessel. The only thoroughly satisfactory case of silver ligature is one in which Mr. Holmes employed the wire on the femoral artery for popliteal aneurism. In this instance the wound healed in a fortnight, and, though suppuration occurred, the ligature was not discharged from the wound. But silver wire is dangerous, for if tied tightly it cuts the coats of the vessel more deeply, and produces more and more rapid ulceration than the silk thread. In preventing secondary hemorrhage its use is too uncertain to be preferable to silk. Carbolyzed catgut, when properly prepared, may be used for the ligature of a large artery with perfect success without dividing the external coat of the vessel or interrupting its continuity, while the ligature itself is absorbed, and the wounds made over the vessels so tied often unite by first intention. This rapid union of the deep parts of the wound is a necessary condition for success.

The Professor then gave the history of the use of catgut for this purpose, mentioning especially the experience and comments of Sir A. Cooper (given in the "Surgical Essays" by Cooper and Travers, and in the 12mo. edition of his lectures published in 1829) and of Porta, who gives in his work nine cases in which the operation was performed by himself, and two in which he assisted others. Porta nowhere, however, contemplates the occlusion of the vessel without its division; and, speaking of secondary hemorrhage, says that "we shall never be able to annihilate its possibility by any method, or to reduce it within the limits which we observe in the lower animals." In the case where Sir. P. Crampton used a ligature of moistened catgut in tying the common iliac, in 1828, if the catgut had been properly prepared, the ligature tied firmly and cut off correctly, and the wound and the patient been so treated as to produce speedy consolidation of the deep parts, there would probably have been no hemorrhage.

After referring to Mr. Lister's tract "On Ligature of Arteries on the Antiseptic System," Prof. Holmes remarked that, whether Mr. Lister's explanation of his method of dressing wounds be or be not the correct one, that method is very frequently successful in producing rapid union, especially in the deep parts of the wound. This being granted, and as it can be demonstrated that catgut ligature, under favorable circumstances, will gradually melt away in the tissues without causing ulceration, it cannot be denied that the object which John Hunter and his followers so sought after had been discovered. A preparation of the lecturer's own case, showing successful ligature of the carotid and sub-clavian arteries with carbolized catgut, and with no interruption of the continuity of either vessel, was exhibited. This specimen affords anatomical proof that a large artery in the human subject may be tied in such a manner that the wound may unite by first intention, and the patient never be in any danger of secondary hemorrhage; and, further, the case shows that the catgut ligature may be removed by absorption, the vessel remaining undivided. Mr. Holmes expresses his opinion of the carbolized catgut in these words: "No material can be imagined better adapted for a ligature than catgut long steeped in carbolized oil; it is perfectly tough, perfectly flexible, and perfectly smooth. It excites no irritation, absorbs no putrescent fluid, and, though it gradually melts away, yet holds the artery firmly enough to close its tube permanently. Having used it in all large operations for about two years, I can testify to the latter fact, and I can say that I have never seen any sign of irritation produced by it, nor witnessed the escape of any of the little knots from the wound, and that I hold it to be a very much better and more convenient hemostatic than torsion, and infinitely superior to acupressure. In fact, I have found it possess all the comfort of the silk liga-

ture, without its disadvantages. I do not, however, imagine that catgut, or any other ligature, can be applied to an artery with perfect success unless the tissues around become rapidly coagulated by first intention. An artery exposed in the middle of a suppurating cavity will, I believe, always soften and give way, and it was most probably because they failed to secure this prompt union of the deep parts of the wound that Porta in most of his experiments and operations, and Sir A. Cooper, in the operations which he performed after his first successful one, failed to obtain this perfect result." The inference then, is, that the subclavian may be justifiably ligatured in the first part of its course in those innominate aneurisms which advance after distal ligature of the carotid.

The applicability of the distal operation in the treatment of aortic aneurism, and the probable reasons of its beneficial effect in this form of the disease, were next discussed. With respect to the ligature of the left carotid for aneurism of the arch of the aorta, there is no doubt that there are cases in which it is very beneficial, though there are no theoretical grounds for the believing that cure can be effected by this operation. The beneficial result, no doubt, is produced by the obliteration of the part of the sac which was previously distended by the current of blood passing into the left carotid. When, then, the growth of the tumor can be traced upward toward the trachea on the left side, this operation is indicated, and when on the right side the distal operation on the same side will suggest itself. Finally, the treatment of aortic and mixed aortic aneurisms by galvano-puncture was considered, and the difference in the clot produced in any albuminous fluid, according as the positive or negative pole is used, was mentioned; the positive pole producing a firm coagulum, and the negative a large a frothy mass formed of minute coagula.

Mr. Poland's summary of Abeille's cases proves that the clots produced by electricity may be as efficacious in the cure of an aneurism as those produced by other means; but it must be allowed that there is at present much uncertainty as to the value of the method, and as to the effects of any given operation, and many details as to the method of employing this agent have to be cleared up before our estimate of the value of it can be formed with certainty. Prof. Holmes is disposed to think that both poles should be used, that the action should continue for a considerable time under anæsthesia, and that the needle should be partly coated with vulcanite, so as to defend the soft parts covering the tumor. The uncertainties connected with its employment, however, are sufficient for discarding electro-puncture in cases of aneurism of arteries accessible to pressure or ligature, as these methods are safer and more reliable.—*Medical Times and Gazette.*

ON THE TEACHINGS OF DR. J. MARION SIMS REGARDING THE CAUSE AND TREATMENT OF STERILITY.

By DR. VON SCANZONI.

(Beiträge z. Geburtskunde u. Gynaekologie. Scanzoni, vol. vii. p. 109.)

The fundamental idea of the modern surgical treatment of sterility by operations designed either to dilate or to straighten out the cervical canal is that there always exists a mechanical obstacle to the entrance of the spermatozoon. Scanzoni earnestly protests against the acceptance of a theory based on careless observation of phenomena, and which necessitates the frequent performance of an operation which is in itself dangerous, and in some cases fatal. Opposed to the new school of gynecologists who regard the publication of Dr. Marion Sims's book on uterine surgery as the dawning of a new era in this hitherto neglected branch, he maintains that the want of careful histories of cases, and a certain or rather an *uncertain* looseness of expression with regard to actual results, so decidedly deprive it of scientific value that its review becomes a difficult and arduous task. So far from regarding a mechanical obstacle to the entrance of the seminal fluid into the uterus as the sole cause of sterility he brings forward and urges the importance of the following morbid conditions, which may be and often are, the causes which prevent conception, —viz., functional disease of the ovary or testicle, which results in the production of a vitiated ovum or spermatozoon, or the occurrence of any one of the numerous pathological conditions which may prevent the exit of the ovum from the ovary, its reception by the Fallopian tube, and its passage into the uterus. We are, for the most part, utterly unable to diagnose the existence of any of the abnormal states which would produce such a result; and yet the possibility of conception depends on the physiological and harmonious sequence in the functional activity of these organs.

In order to prove that conception may occur in spite of the most extreme displacement, several cases are given in detail, where the introduction of the sound was rendered absolutely impossible, owing to the marked flexions of the uterus, or, as was the case in one instance, to the existence of an inguinal hernia of that organ; and yet in all the histories given conception repeatedly took place. While Scanzoni admits the general truth of Marion Sims' statement that the pain of dysmenorrhœa depends on a mechanical obstacle to the passage of blood from the cavity of the uterus, he still maintains that *all* cases cannot be explained in this way, and states that some of the most severe cases of uterine colic he has ever seen occurred before one drop of hemorrhage had taken place in the uterus, as he has repeat-

edly proved by the introduction of a sonnd, while the pain sometimes continued after the flow had been freely established, but not sufficiently so to take away the pressure from the over-excited nerves. So too the most intense uterine colic may be excited by the application of leeches to the cervix, even in cases where care has been taken to guard against the passage of one of them into the uterus—an accident which some authors have availed themselves of to explain the severity of the pain.

Scanzoni then goes on to show in detail that in many cases it is simply impossible to diagnose, either by the fingers, sound, speculum, or by the aid of the sponge tent, such a contraction of the cervical canal as to justify us in regarding sterility as its *necessary* consequence, whether this contraction be due to a congenital or an acquired constriction of the os externum; the infiltration and swelling of the mucous membrane following a chronic catarrh of the organ, and a consequent development of the folds of the arbor vitæ; the presence of enlarged follicles with broad bases of the attachment (the ovula Nabothi); new formations grouped together under the head of mucous polypi, which for the most part originates in these same follicles; more or less extensive fungous excrescences caused by papillary growths; spastic contraction of the os internum; the various and often-occurring forms of flexion; diffuse hyperplastic growths affecting either the entire cervix or only certain portions of it; myomatous and fibroid tumors having their seat either in or near the cervix; or to intra-mural or pedunculated growths attached to the body of the organ. In all of these conditions neither the sound nor our other aids to diagnose enable us to exclude pregnancy, as the histories of numerous cases given by Scanzoni show.

The author deplores the incompleteness of the statistical tables in Simon's book. It is true that it is stated that the operation for the Bilateral Incision has been performed five hundred times, but in only six of these cases is it stated that the wished-for result was attained, viz.: that the woman conceived. Four other cases in which conception followed the amputation of the cervix must be added to these. While Scanzoni does not doubt that Sims has other more extended statistical statements which place the operation in a more favorable light, still he says that these are the results from which we are asked to accept the operation. These ten cases are carefully analyzed and reviewed by Scanzoni, who finds that seven of the women had been pregnant before the operation—in other words, that we have to do here with cases of *acquired* sterility, in which the prognosis is unquestionably more favorable. The fact that the operation is not without danger is then insisted upon by Scanzoni, and the members of the profession are exhorted to review calmly the evidence on which this operation rests—the value of which

cannot be denied in a few well-selected cases—before they follow blindly the so-called new school of uterine surgery.—*Medical Times*.—*Western Lancet*.

WHAT MAY BE REALLY LEARNED FROM MICROSCOPIC EXAMINATIONS OF URINE.

By JAMES TYSON, M. D., Lecturer on Microscopy and Urinary Chemistry in the University of Pennsylvania.

Few subjects are more imperfectly understood by the mass of general practitioners than that of Urinary Microscopy. Many physicians think that if a specimen of urine is handed to a microscopist for examination, the latter must be able to give such copious and precise information as will unravel all the mysteries of the case, and furnish the key to a speedily successful treatment, or else the instrument is condemned as an expensive luxury, which, if not useless, is scarcely of sufficient utility to justify the outlay necessary to procure it. It is indeed true that in a large proportion of instances the information furnished by a microscopic examination of the urine is limited, and that in a smaller number of cases its results are entirely negative.

It is in consequence of the fact that many instances of unrealized expectations have come under my observation, that I have presumed to occupy a portion of this evening in considering the real advantages which may be looked for in a study of urine with the microscope.

Premising that such a range of power as is obtained by two objectives, an 8-10 and a 1-5, with two eye-pieces, and A and B, or a low and medium power—that is, from 80 to 400—will most usefully subserve our purposes, we may divide urine which is to be studied microscopically into (a) *albuminous* and (b) *non albuminous* urine.

A. The urine with regard to which we may expect to derive most information, and in the study of which the microscope is indeed indispensable, is albuminous.

The first question to be determined with regard to albuminous urine is as to whether it contains casts of the uriniferous tubules. This question answered affirmatively, the general affection, Bright's Disease, is recognized; the form of cast found to be most prevalent in connection with the quantity of albumen, and especially with the aid of the clinical history, enables us to determine the special form of Bright's Disease, whether chronic or acute; and if the former, whether due to the smooth white kidney, the highly fatty organ, or the chronically contracted kidney, and even amyloid disease, with considerable certainty. And thus

informed, matters of prognosis and treatment follow, the value of which no one can deny.

On the other hand, it is exceedingly seldom that the microscope enables us to decide the existence of cancerous from that of other destructive disease of the kidney, as calculous pyelitis, the common purulent products being undistinguishable. Still less are we able to say, by means of the microscope alone, with regard to a limited number of pus or mucus corpuscles, that they are derived from the kidney rather than the bladder; at least, all attempts to this end are too speculative to be admitted to a place among the positive informations furnished by microscopic examination of urine.

Among the causes producing albuminous urine without the presence of casts is the presence of pus, and although the same corpuscular element attends which is found in mucus, the albumen never accompanies mucus alone, while the distinctive characteristic muĉin-threads developed on the addition of acetic acid to mucus furnishes the crucial information. This is apart from the physical characters of purulent urine, involved in the ready miscibility of the pus with the urine, its rapid subsidence and opacity as distinguished from the difficult miscibility of mucus, its transparency and slow deposition after mixture has been produced. Although albuminous urine, which is due to pressure upon the renal vein by a tumor or pregnant uterus, sometimes contains casts when the obstruction has produced actual congestion, this is comparatively rare, and the comfort which is derived by the practitioner from a knowledge that the albuminous urine of a pregnant woman does not contain casts, which the microscope alone can tell him, is unspeakable.

Urine which contains blood, from whatever source derived, is also albuminous. Except, however, when blood corpuscles are contained in casts of the uriniferous tubules, which indicates their undoubted renal origin, it can scarcely be claimed that the microscope is of much service in determining the exact source of the blood. It is rather the grosser characters, as the presence of coagula when blood is derived from the bladder, and the smokey hue of acid urine containing blood from the kidney, that gives us the desired information.

It is comparatively rare that albuminous urine results from affections of the bladder and prostate, except as the result of hemorrhage in malignant disease of the latter organs. In non-hemorrhagic malignant disease, attended by suppuration and rapid destruction of tissue, the urine may become impregnated with albumen, which will be explained by the presence of pus, and occasionally of fragments of tissue composed of the large multinuclear cell-masses formerly considered so characteristic of cancer. In these cases, the almost inevitable though not indispensable accompaniment of vesical irritation will point to the bladder rather than the kidneys.

In the limited number of instances in which I have been permitted to examine the urine of patients who, as revealed by a *post mortem* examination, suffered with cancer of the kidney, although albumen has been invariably present, I have never yet seen the cellular or other elements of cancer—nor, indeed, in cases of cancer of the bladder, though, in the latter, other observers have undoubtedly been more fortunate.

B. *Non-Albuminous Urine*.—It must be admitted that the purely microscopic study of non-albuminous urine is not attended with so many advantages to the practitioner as that of albuminous. Still, there are numberless instances in which at least the clinical history of a case is not complete without a microscopic examination.

In no instance, perhaps, is the inexperienced person more frequently disappointed than in the examination of urine from cases of suspected calculi, both renal and vesical, but particularly the latter. Indeed, it may be laid down that as a rule, except in uric acid lithiasis, the microscope alone rarely furnishes much information. To those who have had any experience, it is well known that, in cases of phosphatic and oxalic lithiasis, the urine is commonly without any sediment, from the examination of which alone information can follow. With uric acid lithiasis, however, this is not the case, and very generally patients thus suffering have copious deposits of uric acid crystals. In the latter, therefore, we are able to make a positive diagnosis. The difficulty in the case of the phosphates is accounted for by these facts: The extreme solubility of the phosphates, and the dependence of their deposition upon the alkalinity of the urine; and in the case of an existing calculus, its power to excite, by decomposition of the surrounding organic matter, an alkalinity of the urine immediately around it, with consequent deposition of phosphates from such proximate urine, while the reaction of the great body of water continues acid. Occasionally, also, in the case of suspected oxalic calculus, information is derived by examination of urine from the constant presence of octohedral and dumb-bell crystals of oxalate of lime. Especially, if these be aggregated so as to form microscopic calculi of considerable size, as is often the case. If the symptoms of renal calculus are present, and such crystals be met repeatedly, we have good reason to believe the calculus of oxalic composition.—*Southern Medical Record*.

INCONTINENCE OF URINE IN CHILDREN.—Mr. Holmes Coote recommends for this intractable affection the administration of creosote, in one minim doses, three times daily, combined with assafoetida and rhubarb pill, of each two grains.—*New York Medical Record*.

MEDICAL GLEANINGS.

THE RELATION OF OBESITY TO DISEASES OF THE SEXUAL ORGANS IN WOMEN.—Dr. H. Kirsch, of Prague, (Centralbl. f. d. Med. Wis., No. 34), advances the idea that diseases of the sexual organs in women are not unfrequently dependent upon the presence of an abnormal amount of adipose tissue. Of two hundred and fifteen fleshy women whom he examined, two hundred and eight were found to suffer from some irregularity in the menstrual function. Of these two hundred and eight, one hundred and sixteen complained of scanty menstruation, (*menstruatio pauca*), one hundred and forty-six of leucorrhœa, and fifty-six of chronic metritis. Anteversion and antelexion of the womb in thirty-nine of these cases; retroflexion in eleven; forty-eight were sterile, and forty-seven suffered from hysteria. Dr. Kirsch maintains that the majority of these various affections tend to improve, without further treatment, when once the obesity has been made to disappear. To attain this result, he recommends the adoption of a course of diet somewhat like that suggested by Banting, combined with a moderate use of the waters of Carlsbad and Marienbad.

TREATMENT OF SCARLET FEVER.—The late Professor George T. Elliott, in a lecture on this disease, gave the following method of treatment: to bring the eruption out, if it has not already presented itself, order hot baths and blankets. Give nothing to eat at first in the eruptive stage, and only allow the simplest nourishment the first day. Patients experience great relief from baths, and the application of cold cream or mutton tallow over the whole body. Visit the patient twice a day. By pouring a pitcher full of cold water over the back of the neck, especially when the glands are enlarged, great comfort is experienced. As a gargle, make use of chlorate of potash or soda. Pieces of ice are good, in the mouth. Sprays, thrown in with Richardson's instrument, of lime water, solutions of alum and sulphate of zinc, are beneficial. As a palative to the throat, the vapor of slaked lime can be recommended. Strong beef-tea, with opium, may be thrown up the bowel. Begin to feed the patient from the second day of the eruption with animal essences. If the tonsils are enlarging and the pharynx exhibits much redness, with diphtheritic exudation, the physician has a right to say that things look bad. If the throat symptoms do not mitigate on the fourth or fifth day, then one feels that there is a good deal of danger. When the kidneys show hyperæmia, desquamation, or transitory albuminuria, then there is a two-fold danger. Always examine the urine. When the patient has kidney disease, the treatment should be directed to the skin and bowels; when the latter are loaded and constipated, give powerful saline cathartics. Get Ronchetti's apparatus, to produce perspiration. To con-

valescing patients the use of iron is beneficial. The bisulphites have been recommended, but, from experience, they cannot be advocated. Belladonna is not always a prophylactic, although, on account of its innocence, and a feeling of satisfaction to the practitioner and family, it is well to administer it.—*New York Medical Record*.

MYCROZYMES IN A HIGHER ROLE.—At a late meeting, Oct. 21, of the Paris Academy of Sciences, MM. Becham and Estor presented a paper "On the Role of Mycrozymes in Embryonic Development," in which they communicate the startling information that these infusoria are absolutely the "*facteurs des cellules*." All their observations were made upon the egg of a chicken, and they describe in detail the formation of the various tissues connective, muscular, nervous, blood globules, etc., by the arrangement of mycrozymes. This construction of the tissues constitutes the order of *progression*. When the tissues die, a reverse order prevails; the mycrozymes become chaotic. This is the precursor of putrefaction, and constitutes the order of *regression*. The acceptance of this doctrine of tissue genesis would completely abolish the *omnis cellula e cellulis* theory as well as that of spontaneous generation.

"For formation of a new cell, no parent cell is necessary, nor will a simple fluid suffice. The presence of the mycrozyme is essential. It exists *always*, and forms the cell.

UNION OF BONE BY "FIRST INTENTION." — At a recent meeting of the Philadelphia County Medical Society, as reported in the *Medical Times*, a lad aged ten years was presented, whose tibia had been fractured within an inch of its lower extremity, by the wheel of a cart. No displacement or crepitation could be produced except under anesthetic influence. The limb was placed in a fracture box, and when examined, on the 17th day, exhibited no trace of fracture. The boy walked on the 28th day, and the surgeon believed he could have done so on the 17th. A question arose whether it was possible for the bones to unite so soon, and whether "union by first intention" was possible in bones. We see no difficulty in explaining the case. The fracture being transverse, and the fragments so firmly held in place by the surrounding attachments as to prevent displacement by the hands of the surgeon, we can see no reason why they could not have grown together without any dressing whatever. Indeed, it does not appear to us impossible, that, in so young a subject, and with such a fracture, the healing process would have taken place had the lad been permitted to walk on the leg from the first, to the extent of his inclination or ability. Fractures of the clavicle are known to unite without dressing, even when oblique. We have no doubt that simple, transverse fractures in the vascular portion of the long bones, and in good subjects, not only

do not require the perfect rest which is generally exacted, but would unite more speedily with some degree of daily active exercise of the limb. The friction of the surfaces while in constant coaptation, together with the perfect vitality of the surrounding parts, unembarrassed by pressure, and invigorated by exercise, would certainly promote the formation and organization of callus, and expedite the cure.—*Pacific Med. and Surg. Journal*.

SULPHITES IN TONSILITIS.—Dr. Thos. A. Elder thus speaks of their use: "I have not met with a single case which the sulphites, administered in sufficiently large and often repeated doses, would not promptly relieve and cure. The doses which I use are those recommended by Dr. Tyrrell, gr. xx to xxx, repeated every hour, for an adult, and correspondingly large doses for children. The fever is generally dissipated in 12 hours—rarely continues 24. The soreness of throat, headache, etc., are generally as promptly relieved, and 48 hours are sufficient for a cure. In children, when saturated, they have produced sweating, and the peculiar cadaveric hue of sulphurous acid fumes.

"When the disease has progressed to the stage of exudation—when the shoe-peg points begin to appear, or later—I have never met with a case which I thought was benefitted by the sulphites. I am then accustomed to rely upon a prescription of Prof. Miller, for diphtheria, which has almost invariably given prompt and permanent relief.

" R. Morphia Muriat.,	gr. ij.
Acid. Muriat. dil.,)	
Tr. Ferri Chloridi,)	aa dr. ij.
Syrupi.	oz. ss.
Aquæ destillat.,	oz. ij.

" M. Sig. Dose: A tea-spoonful three or four times a day, after water."

He also highly recommends bi-sulphate of soda in scarlatina.

Book Notices.

THE SCIENCE AND ART OF SURGERY—Being a Treatise on Surgical Injuries, Diseases and Operations. By JOHN ERIC ERICHSEN, Senior Surgeon to University College Hospital. A new edition, enlarged and carefully revised by the author. Illustrated by upwards of 700 engravings on wood. In two volumes of nearly 800 pages each. 1873. Philadelphia: Henry C. Lea. Cincinnati: R. Clarke & Co.

The work on surgery of Mr. Erichsen has been known to the American profession for many years. As a text-book for students and for use for the practitioner, it has no superior in the world. When consulted by students or practitioners on what work upon surgery to procure, we always mention Erichsen's as among the best.

Every effort has been employed in the present edition to make the work worthy of that confidence with which the profession has so long

avored it; and in order to keep it abreast of the general advance of surgical science and practice, considerable change has been made. Several chapters have been recast, and some also re-written. A considerable addition to the text has been rendered unavoidable, although much matter that was obsolete has been struck out. The result of the improvements has been that, instead of being issued in one volume, it is now published in two.

In treating of the various subjects belonging to surgery, the descriptions that are given of the symptoms, causes, diagnosis, and treatment, are as full as the importance of each demands, and the present state of knowledge permits. Diagnosis receives special attention; and, as accuracy in this is an all-important requisite for success in treatment, the conditions with which each injury or disease may be confounded are carefully described, and the means of distinguishing one from another pointed out.

Throughout the work, as the author states, the object is to place before the practitioner and student the science and art of surgery, not as consisting merely in the observations of such diseases, injuries, and malformations as belong to surgery, or in the dexterous application of manual or operative means for their relief; but as demanding an exercise of general medical knowledge, and a thorough acquaintance with all those conditions, whether intrinsic to the patient or surrounding him, that favor or prevent his restoration to health.

FETICIDE, OR CRIMINAL ABORTION. By HUGH L. HODGE, M. D., Emeritus Professor in the University of Pennsylvania. Published by Lindsay & Blakiston, Phil. For sale by Geo. E. Stevens & Co.

Prof. Hodge has accomplished a good work by giving so much valuable information on this growing crime.

He claims that the spiritual life exists from the moment of conception, and therefore the criminal destruction of the fœtus in utero at any period after conception is murder.

Ever student should read this pamphlet before engaging in the practice of medicine.

M.

Editorial.

MEDICAL ATTENDANCE UPON PAUPERS—The city of Cincinnati, for many years, has made provision for medical attendance upon those unable to pay for it, at the expense of the city. Until a few years ago the Directors of the Infirmary, consisting of three gentlemen elected by the people, appointed a physician to each ward, who received twenty-five cents a visit to such sick individuals whom they had decided were entitled to aid. More recently, however, the duty of appointing physicians to attend upon the sick poor has been exercised by the Board of Health, which consists of the mayor *ex officio*, and a number of members appointed by the Common Council, etc. Under the new order of things, each ward physician receives \$25 a month without regard to the services he may render. This compensation affords to each one of the outdoor-poor physicians, or the majority of them, on an average of *from five to ten cents a visit*. But besides visiting patients at their houses, each ward physician is required to attend upon any station house in his ward, whenever called upon by the police, without extra compen-

sation; vaccinate all comers to his office who may desire it, and visit the public schools for the purpose; visit the houses of prostitution of his ward each year, and enrol the inmates; and perform whatever other services the Board of Health and Health Officer may impose upon him. He pays his own office rent, and supplies himself with whatever surgical instruments he may need at his own expense.

If the annals of injustice were raked over, we do not believe more disgracefully unjust regulations could be found. Here are men, presumed to be men of culture and education, who, besides possessing a general learning above that of the masses, have expended time, labor, and money in qualifying themselves in medicine, requited in a sum for the most important services that can possibly be rendered that a boot-black or errand boy would regard as oppressive. It is held the world over, that, in compensating for services, the compensation should bear a proportion somewhat commensurate with the services rendered. But is such the case with the outdoor-poor physicians of Cincinnati? By no means. The little dirty-faced blacking *fiends*, as they are termed, get ten cents for blacking a pair of boots, and one of them will polish up two pair while our poor doctor is making one visit for about eight cents, besides discharging many other onerous duties. The great moral principle underlying compensation is flagrantly violated.

The fact that the outdoor-poor physicians are generally young men who gladly embrace the opportunity of filling the positions is no justification for the pitiful remuneration that is granted. Let a man be young or old, he should be adequately remunerated for his services. Because a hungry man may be willing to pay \$100 for a ten cent loaf of bread to stay his hunger, that does not justify any one in demanding that sum from him for supplying his need. Neither is it just to take advantage of a young man's or an old man's want of business, while he is "waiting for something to turn up," to secure from him most important and valuable services for a contemptible pittance. Hundreds of dollars are not unfrequently paid an attorney by the city of Cincinnati for advice in a single suit against the city, and yet only a matter of dollars and cents is concerned; but in the case of our public physicians, the healths and lives and happiness of vast numbers of our citizens are at stake. Should the former weigh more in the scale than the latter?

For the condition of things of which we are speaking physicians themselves are not a little to blame. To no small extent a man is valued as he values himself; and, as a rule, no one's services will be estimated higher by others than he himself estimates them. If physicians never seek to have a voice in what should be paid for public professional services, and in no other matters of public health, it is to be expected that they will be rated at a very low rate. The Health Officer, although he has no vote, sits with the Board; but so far as we have observed, he takes no interest in upholding the honor of the profession. On the contrary he has brought about the adoption of rules restricting the ward physicians in their prescriptions, and subjecting them to other humiliating conditions.

We are happy to find that if the profession of Cincinnati are indifferent to the contempt with which their services are treated by the public authorities, with the acquiescence and aid of the Health Officer, the profession of some of the neighboring cities are bestirring themselves in the matter and are uttering their protest. In the city of Wheeling, W. Va., the medical attendance upon the poor is *let out to the lowest bidder*, and we presume that frequently the lowest bidder possesses the lowest grade of qualifications. Quite recently the profession of that city made a manly protest to such a proceeding and to the lowness of the compensation paid for attendance upon the sick poor. As we cordially assent to what is said in regard to the latter,

and as it is just to our purpose in what we have attempted to set forth, we print it in full.

“WHEELING, JANUARY, 1873.

“*To the Board of Commissioners of Ohio County:*

“GENTLEMEN:—The undersigned, regular physicians of the city of Wheeling, having seen the advertised order of your honorable Board for bids, on the part of city physicians for ‘attendance on the poor, examinations of lunatics, and post-mortem examinations, in case of medico-legal investigations, to be awarded to the *lowest bidder* by the year,’ would respectfully represent that it has always been the practice of the medical faculty of this city to render gratuitous service to the poor, who should always be objects of their attention; but, we think that class called *paupers*, who are maintained at the *public expense*, should not only receive proper medical attendance, but physicians should be compensated therefor in proportion to the amount and character of service rendered. If paupers’ bills for food and clothing are paid for out of the public treasury at the usual prices for such articles, why should a physician be asked to render his services (by which he obtains a living) gratis, or at half or quarter rates? beside, paying his proportion of taxes from which said bills are paid.

“If a pauper is sick, he, like others, may have a special preference for a medical attendant; and, if a uniform charge is made therefor, what difference does it make to the public? We would therefore suggest that the Overseers of the Poor in each district be empowered to call in such physician as the patient may desire, or, if he has no preference, the Overseer may use his own discretion. We are quite satisfied there is more *economy* and better attendance by this method than by giving it out to the lowest bidder for a stipulated sum per annum. All experience proves the latter plan to be a *high price for service never rendered*. We would further state that examinations in questions of lunacy are generally of such legal importance, involving the estate, liberty, social relations, etc., of the patient, that they should be decided only by physicians having knowledge and experience in such matters, capable of protecting both the State and patient in their rights and privileges.

“In families, the inception of lunacy is held with so much secrecy and delicacy as only to be confided to the family physician, who is, therefore, the *best person to adjudge and devise in the case*. Post-mortem examinations, whether in case of suspected murder, sudden death, or suspected poisoning, etc., involves such an intimate knowledge of the anatomy of the human body in health, and the functions of the different organs, and the variations and disturbances induced by disease, poison, etc., that an *expert* is the only party to perform it intelligently. Otherwise, the ends of justice and the purposes of law can never be fulfilled.

“If such high and important public trusts as post-mortem examinations and questions of lunacy do not receive a compensation suitable to the skill and judgment necessary to their performance, they will not be done; and, if attempted by unskillful and incompetent persons, they are worthless and unreliable.

“The legal profession are never asked or expected to run a *mercenary competition* with each other. On the contrary, every legal enactment requiring the service of a lawyer amply provides for his compensation. Why should not the same rule apply to physicians? The one involves the *money or estate* of an individual, the other often his *life or liberty*.

“No physician can sell his services *by the year* to a family, county, or city, without injustice or inequality to one or both parties; hence it is forbidden by the American Medical Association, and her auxiliary State and Local Medical Societies.

“If the county, like private individuals, *pays only for medical services*

rendered (at established rates),—the bills in the former case being always sworn to—we are satisfied that it will cost the city or county less than by letting *by the year*, besides insuring a faithful performance of the duty.

"We claim to be honest citizens of the county—old citizens, familiar with the subject of petition, and actuated only by motives of kindness in the statement of facts herein presented.

"All of which is respectfully submitted.

E. A. HILDRETH,
R. H. CUMMINS,
B. W. ALLEN,
H. J. WIESEL,
JOHN C. HUPP,
RICHARD BLUMB,

E. W. BINGEL,
A. S. TODD,
R. W. HAZLETT,
JAMES CUMMINS,
JOHN FRISSELL,
G. BAIRD,

W. J. BATES,
S. L. JEPSON,
W. J. BATES, JR.
D. BAGUELY,
C. E. MARTIN,
JAS. E. REEVES."

If the physicians of the poor of Wheeling have an opportunity of *dodging*, there is no opportunity of the kind here. Shamefully incompetent physicians, however, in some of the wards, are frequently made ward physicians, for the reason that no competent young doctors just out of college are to be had to fill the position until they can make enough to pay their board and office rent from "pay patients;" and thus injustice and cruelty are inflicted upon the sick poor. But then there is no glory in curing and relieving the destitute sick by adequate medical attendance properly remunerated, while there is in building costly fountains for ornamentation and making magnificent parks with fine drives for the rich.

COMMENCEMENT EXERCISES OF THE CINCINNATI COLLEGE OF MEDICINE AND SURGERY. — The Commencement Exercises of the thirty-third regular session of the *Cincinnati College of Medicine and Surgery* were held in the college building on George street, between John and Smith, Monday evening, Feb. 17th. The occasion was really a brilliant one, and will long be remembered by those who participated in it. Although the evening was an exceedingly inclement one—cold, disagreeable, sloppy under foot, and threatening a storm—yet the spacious amphitheater was crowded with ladies and gentlemen. Even every inch of standing space was filled, and large numbers were compelled to go away, not being able to crowd into the room.

The following was the PROGRAMME OF EXERCISES:

Prayer by the REV. JAMES Y. BOICE, Pastor of the First Reformed Presbyterian Church.

Statement of the condition of the College, by Prof. D. D. BRAMBLE, M. D., DEAN.

Conferring of the Degrees by Prof. G. W. HARPER, A. M.

Valedictory to the graduating class, by Prof. J. A. THACKER, M. D.
Subject:—"The Psychology of Vice and Crime."

Benediction by the REV. JAMES Y. BOICE.

The following is the list of graduates:

W. F. ATWELL, Wisconsin.
ADOLPH BLITZ, Ohio.
J. P. BRANDON, Ohio.
C. P. CALHOUN, Pennsylvania.
JASPER CORN, Ohio.
R. C. DEWEY, Ohio.
O. A. HELMAN, Ohio.
J. W. JENNINGS, Indiana.
R. C. KINNAMAN, Ohio.
W. B. KROESSEN, Pennsylvania.
JAMES LISLE, Ohio.
T. E. LAMPING, Ohio.

I. N. LIGHTNER, Pennsylvania.
A. L. MCLEOD, Ohio.
J. H. McLAUGHLIN, Pennsylvania.
GEORGE MILLER, Ohio.
LEONIDAS MASON, Indiana.
T. H. PERCY NORCOCK, N. Carolina.
O. M. NORMAN, Ohio.
E. R. PATTERSON, Ohio.
B. F. PRICE, West Virginia.
J. TAYLOR STEWART, Kentucky.
THOMAS TEAGUE, Ohio.
I. G. WOOLSEY, Georgia.

All regretted very much the absence, by means of a tardy railroad train, of the Rev. BISHOP WILEY, D. D., the President of the Board of Trustees, as he was set down for an address; but Prof. Harper lightened the disappointment very much by the very satisfactory manner in which he discharged the duty of distributing the Parchments to the young gentlemen of the graduating class. The extemporaneous remarks he made were highly pleasing and to the point.

The address of the Valedictorian will be found printed in the first form of this number of the NEWS.

After the delivery of the valedictory, an *act* transpired that was not set down in the programme, and which was a surprise to at least one of the parties concerned—the recipient of the testimonial. Immediately on the Valedictorian taking his seat, Prof. R. C. S. REED arose, and, first addressing the audience and then the gentleman himself, proceeded to present Prof. G. W. HARPER, the Secretary of the Board of Trustees, on behalf of the Faculty, a beautifully-wrought, gold watch-chain, as a mark of their high appreciation of his high worth, and of his steadfastness in subserving the interests of the college.

Prof. Reed spoke as follows:—

LADIES AND GENTLEMEN:—Before we are formally dismissed, I desire to discharge a duty imposed on me by my colleagues of the Faculty.

We have in our Board of Trustees, as now constituted, at least one individual not immediately connected with medical college teaching who has devoted much time to, and labor for, the success of our college—one who has never faltered in the discharge of any duty. His clear and cultivated perceptions of justice, and his entire devotion to his convictions of right, have been of great advantage to our enterprise, and require from us more than a passing notice. Prof. Harper, you will please to allow me to address you in the name of the Faculty. If it is not now it should be an established custom to make public mention of, and suitably reward, those who have cultivated and, under trying circumstances, practiced virtuous principles.

During our efforts to relieve the college of incompetent and incompatible elements, your practiced discrimination enabled you to see the right, and, without identifying yourself with faction or party, you pursued your course regardless of the importunities of friends, or the threats of enemies. And this evening it is our pleasure to give you credit, in this public manner, for a liberal share of the effort required to establish this institution on its present permanent basis. And it is also our pleasure to congratulate you on its prosperous condition and its brightening future. Your labors have not been in vain. Truth permits the statement to go forth, that our college is attracting the attention and receiving the patronage of a greater number of the prominent members of the medical profession than at any former time.

The Faculty, of one accord, appreciating the great value of these principles to us, as practiced by yourself, have caused this chain to be made, and this shield to be attached to it, inscribed, as you will see, "From the Faculty of the Cincinnati College of Medicine and Surgery to Prof. G. W. Harper," and they have authorized me to present it for your acceptance. In doing so allow me to express the hope that in the future, as in the past, we shall share your confidence and your efforts to promote the interests of our college—to extend its usefulness and make it a greater blessing to suffering humanity. You will also allow me to express my conviction, that if you shall prove true in all things as you have proven true to the interests of the Cincinnati College of Medicine and Surgery; then will await you at the end of the journey of life that welcome plaudit—well done good and faithful servant.

Please accept this chain as an evidence of the very high esteem the faculty entertain for the guiding principles of your life.

Prof. Harper, on the conclusion of Prof. Reed's remarks, in a few happy words, expressed his thanks for the testimonial of regard for himself on the part of the Faculty. He confessed that he had always felt a deep interest in the College. He had labored, he said, in the past for its advancement, and he should exert himself still more in the future for its prosperity. Now that the school had secured a fine, new edifice, owned by its Faculty, admirably adapted in all respects for its purposes, he was sure it would receive a fresh impetus in its prosperous course.

After the interesting exercises at the college were closed, the graduates, with the Trustees, Faculty, and friends, sat down to an excellent repast served at Kepler's, where some time was spent in social enjoyment of a most pleasing character. Coffee, and not liquors, was served so that bacchanalian songs were not in order; nor, had they been, could they have added to the good feeling and harmony of the occasion. The evening was one which will be remembered with pleasure by the graduates, and with much satisfaction by the Faculty and friends of the Cincinnati College of Medicine and Surgery.

At this writing the spring term has commenced under unusually favorable auspices.

THE CONFERRING OF DEGREES.—The February number of the *Lancet and Observer* has a sprightly editorial on the apprehensions experienced by medical students upon the approach of the final examinations when it will be decided whether or not the applicant will receive a sheepskin to carry home with him as a testimonial that he is qualified to practice medicine. We quote as follows:

"Alas! poor student, you little know what a bugbear these final examinations are. Are you in doubt as to the result of that FINAL EXAMINATION? We doubt very much whether five men have been REJECTED in as many years in this city. Will you pass? We answer you, certainly. Why, last winner, or rather last spring, one of the numerous colleges in this city conferred their degree in HONORIAM upon an individual who vends a 'DIURETIC MIXTURE,' which will cure almost any disease, if we are to believe the statements on the bottle. If a man who ADVERTISES can receive a diploma WITHOUT PASSING AN EXAMINATION, what have you to fear? Our colleges all wish to swell their graduating list; hence, have no fears. 'COPPER' your last dollar on the result."

We do not know how many candidates for graduation have been rejected during the last five years at the Ohio Medical and the Miami Medical Colleges, but we do know that very considerably more than that number have been rejected at the Cincinnati College. Including those who were advised by the Dean not to be candidates, who were aspiring to be such, at least twelve per cent. have been rejected. One of the latter number went over to the Ohio Medical College a year ago, near the close of their session, and graduated at the end of the term. This is not the only instance, however, by any means, that the graduating class of the Ohio Medical College has been swelled by rejected applicants from the Cincinnati College. At their last commencement, they graduated one Eliab Meyers, of Clarke Co., O., who went over to them from the Cincinnati College. Last spring he attended only about six or seven weeks upon the Lectures of the latter institution. Last fall, a month after Lectures had commenced, he returned and matriculated; but having reason to believe that his partial attendance upon two terms of lectures would only be credited to him for one, he left, and went over to the Ohio Medical College and graduated at their last commencement, in *Pike's Opera*, amidst the sound of soul-stirring music—the clangor of kettle drums, and the sweet melodies of several bass viols and tromboons.

The manufacturer and vender of the "diuretic mixture," referred to in the editorial of the *Lancet and Observer*, upon whom the Ohio College conferred the honorary degree of M. D., last spring, never studied

medicine a day. The nostrum he calls by his name, he flaunts its praises in the most unblushing manner. In this respect he puts to shame Helmbold and such ilk. From one of his circulars, which he spreads far and wide, sticking them under people's doors and posting them on fences and walls, we quote the claims set up for this miserable nostrum by its unblushing maker and vender, who has just been made an M.D. by the Medical College of Ohio. The lines quoted are in the order of the circular, which has them printed in large, display type:—

"It is the best Blood Purifier."

"It Cures without Depleting the strength of the Organs or the General System."

"It is pleasant to the Taste and grateful to the Stomach."

"It has performed Cures that would have been regarded as Miracles in the earlier Ages of the World."

"It Cures all Diseases of the Kidney and Urinary Organs."

"It Cures Gout and Rheumatism."

"It Cures Dropsy and Diabetes."

"It Cures Gravel and Calculary Deposits."

"It Cures Boils, Carbuncles, and Eruptive Diseases of the Skin."

"It Cures Colds and Influenza."

"It is the Greatest Boon ever Conferred upon Suffering Humanity."

We print these boasting claims precisely in the order they are printed upon the handbill in very large type. Do our readers doubt that the vaunting quack, who thus sets forth the praises of his miserable nostrum, has recently had the degree of M. D. conferred upon him by the Medical College of Ohio. They may, but it is even so. Some may think that the faculty was not aware of his character; but they have no such excuse. He has been an advertising quack in newspapers, handbills, and posters for years.

We would suggest to the faculty of the Ohio College that, since they have commenced conferring the degree of M. D. on advertising quacks, they monopolize the business, and at the close of the next session confer the same on Dr. C. KERR, "The Great System Renovator" man. He is far more modest in his claims for his medicine than the "Diuretic Mixture" man is for his.

MERCURY IN THE TREATMENT OF BRONCHITIC ASTHMA.—Dr. Thorrowgood, of the Hospital for Diseases of the Chest, observes that ordinary spasmodic asthma is a spasmodic neurosis of the lungs, and may, even in the most severe cases, be quite independent of any inflammatory or organic change in the pulmonary structures. Hence it is that we often get excellent cures by the employment of medicines of the nervo-tonic class, such as iron, quinine, arsenic, silver, and zinc, with the occasional assistance of certain sedative preparations, such as belladonna, stramonium, datura tatula, etc.

In dealing with the complaint which he calls bronchitic asthma, a different plan of treatment is required, and he believes an important medicine in real bronchitic asthma is found in mercury. To illustrate the remedial action of this drug, he appends short notes of several cases in which mercurial treatment was employed with success.

MICROSCOPES.—We have several small microscopes on hand sent from London for sale. Each one is supplied with a separable objective of French form but English make, of a quarter-inch focus, of excellent definition. The magnifying power ranges from 40 to over 200 diameters. It is an admirable instrument suitable for any practical work of the physician. The price is only \$12. It can be sent by mail in separate parts for about \$1 postage.

CINCINNATI HOSPITAL.—The *concours* examination of applicants for the position of resident physician at the Cincinnati Hospital resulted in the election of Mr. W. R. AMICK to fill one of the four places. Mr. Amick is a student of the *Cincinnati College of Medicine and Surgery*, and enjoys an enviable distinction for proficiency in his studies. He was the only candidate from his school—other gentlemen who would have aspired to the places having been prevented from doing so by inability from various causes to spend a year in the city.

We acquiesce in the opinion expressed by the *Lancet and Observer*, that “the examination was fairly conducted; and the fact that at least one student from each college secured a place certainly indicates that no one college clique is in the ascendancy, as was formerly the case.”

SOUTHERN OHIO LUNATIC ASYLUM.—We are indebted to the superintendent, Dr. S. J. F. Miller, for a copy of the Eighteenth Annual Report, for the year 1872.

On November 15th, there were remaining in the asylum 636 inmates—306 males and 330 females. The daily average under treatment during the year was 609. Number of employees 80—40 males and 40 females.

Dr. Miller took charge during the latter part of the third quarter, and therefore, in this report, he is only able to give a brief transcript of the records. Enough is shown, however, to prove that the institution is thriving under his management.

ARCHIVES OF SCIENTIFIC AND PRACTICAL MEDICINE.—This is the title of a new journal, commenced the first of this year, at New York, and edited by Drs. C. E. BROWN-SEQUARD and E. C. SEQUIN. It is issued the 15th of each month, and each part contains about 100 8vo. pages. The annual subscription price is \$4 in advance.

The distinguished position which Dr. BROWN-SEQUARD holds in the profession is an assurance of the high character which the journal will maintain. As a gentleman of learning and of original research, he stands in the front ranks of the profession throughout the world. The two numbers we have received, January and February, by their erudite articles, confirm our highest anticipations of the journal. We hope it will receive a large patronage.

WOOD'S MAGAZINE.—One of the best magazines, and certainly the cheapest, is *Wood's Magazine*. The price of the publishers is \$1 a year. To subscribers of the *News* we will supply it for sixty cents. We can assure our subscribers that it will bear a very favorable comparison with the monthlies at \$4. Try it a year,

JAMES FOSTER, JR. & Co.—We desire to call the attention of our readers to the advertisement of this house. They keep an assortment of goods in their line equal in quality and as reasonable in price as any house of the kind in the U. S. Their students' microscopes and microscopic apparatus they import themselves, and cannot be excelled. There is no need of going East for optical instruments when better and cheaper can be had right at home. Besides having for sale, they also manufacture.

ERRATA.—In the article on the *Psychology of Vice and Crime*, a number of typographical errors occur. On page 109, third line from top, for *immortality* read *immorality*.

THE CINCINNATI MEDICAL NEWS.

VOL. II.

CINCINNATI, APRIL, 1873.

No. 4.

HÆMOPTYSIS, A SYMPTON OF PULMONARY TUBERCULOSIS; ITS DIAGNOSIS AND TREATMENT.

By A. P. DUTCHER, M. D., of Cleveland, Ohio.

I.—THE CHARACTER OF PHTHISICAL HÆMOPTYSIS.

This is one of the most significant symptoms of pulmonary tuberculosis. It is usually present in about three-fourths of all the cases that come under our care, and is often the first to announce the approach of the fell disease. In many instances I have seen it precede all other symptoms for more than a year, and sometimes longer. At one time I had a patient under my care for several years, who had occasional attacks of profuse hæmoptysis before I could detect any positive physical signs of tubercular deposits in the lungs. Many patients, however, experience but one attack, and that only near the close of the disease. In some cases it is trifling in amount, mixed with mucus and pus, and repeated at intervals of a few days. In others, and this frequently at the commencement of the tubercular disorder, the discharge of blood is copious; so much so, that many individuals look upon it with great alarm, and the danger of sudden death is regarded as very imminent. But it is astonishing what an amount of blood a patient may lose in this way and recover. Laennec* records the case of a young man who lost *thirty pounds* in fifteen days. Death is very rare from this cause, and many physicians, in the course of extensive practice, have never seen such an instance.

Nature has guarded against this event with wonderful care.

* Laennec on the Chest, page 192.

An examination of the circulation of a lung when occupied with tubercular deposits, reveals several things that are unfavorable to the occurrence of profuse or fatal hemorrhage. In a state of health, the bloodvessels transmit the blood with the most perfect freedom; but when the lungs are tubercular, the blood coagulates in the extremities of the vessels, and obstructs them in such a manner that scarcely a drop of the vital fluid can escape. Again, when we look into a large tubercular cavity, we discover bands crossing in various directions. These bands consist mainly of bloodvessels and cellular substance. Now, it has been observed by pathologists, that bloodvessels are not very apt to ulcerate. Muscles, bones, and cellular tissue disappear under the influence of ulceration, while the bloodvessels remain almost perfect. Thus the walls of the pulmonary arteries, when surrounded by tubercular ulceration, instead of sharing the disorganization, usually thicken by the development of fresh materials; their caliber gradually diminishes; after a time they cease to be pervious, and are transformed into solid cords. And it is only in those cases in which such vessels are suddenly torn before they are perfectly closed that there can be profuse hemorrhage from a pulmonary cavity. There may be, however, hæmoptysis from the granulations of a tubercular cavity, but it is never very profuse—not sufficient to terminate the patient's existence very suddenly.

But hæmoptysis more frequently occurs in this disease without the rupture of a bloodvessel, or granulations in a pulmonary cavity. Perhaps in the great majority of cases, tubercular deposits cause a compression and obliteration of the pulmonary veins, in consequence of which the blood, interrupted in its natural channel, overflows or exudes into the neighboring bronchi. And this is often greatly facilitated by the peculiar condition of the constituents of the blood, which, being in a deteriorated condition, allows it readily to escape by exhalation from the overloaded pulmonary capillary vessels. If we admit this explanation as true, it will be readily seen in what manner hæmoptysis, moderate in amount, may be useful in preventing the extension of the tubercular disease, and relieving inter-current inflammation. Indeed, statistics prove that those phthisical patients who experience hæmoptysis moderate in amount, usually live much longer than those who do not. But when the disease

is attended with frequent and profuse hæmoptysis, it often proves rapidly fatal. Last winter I attended a young man suffering with pulmonary tuberculosis, who succumbed to the malady in less than three months from frequent and profuse hæmoptysis. It is a well established fact that, where hæmoptysis is very free from the commencement, and continues so, without any very extensive lesion of the pulmonary tissue, it soon exhausts the vital forces, and greatly adds to the tubercular discrasia. Tuberculosis is pre-eminently a disease of debility, and whatever tends in any way to produce this condition of the system will hasten the disease to a more speedy and fatal termination.

But what is a profuse? I find that practitioners differ very widely in opinion on this subject. When I read the case of W. A. (which will be described in a succeeding part of this chapter) to a medical friend of mine, he called it a very alarming instance of hæmoptysis—"very profuse indeed." But when I related another, where six ounces were expectorated in three hours, this was very moderate. We have been in the habit of considering four or five ounces of blood expectorated in as many hours a very free hemorrhage; one or two ounces during twelve hours as moderate; when but a teaspoonful, or half the quantity, trifling. And when it is expectorated in this trifling quantity, from time to time, it should be looked upon as a suspicious circumstance, and the patient's symptoms should be examined with the greatest care, that the true source of the hemorrhage may be ascertained.

When hæmoptysis is very copious, the blood will flow into the throat with great rapidity, and will excite symptoms of vomiting, so that for a moment we may be at a loss to say whether it was discharged from the lungs or stomach. But if the operation is carefully watched, there will be no trouble in making out a clear diagnosis. It will be seen whether it is expectorated by coughing or vomiting. On the other hand, when hæmoptysis is moderate in quantity the blood will frequently pass up through the air passages into the throat without exciting very little cough. Individuals sometimes try to deceive themselves and their friends as to the source of the hemorrhage, and the physician may be deceived unless he is constantly on his guard. I have known patients to be exceedingly careful to conceal the fact of their having had hæmoptysis at all from their physician. A

young man once came to me suffering with pulmonary tuberculosis, who, when asked if he had ever had bleeding from the lungs, said no—but subsequently confessed that he had bled frequently.

II.—HÆMOPTYSIS IN THE TWO SEXES—STAGE OF THE DISEASE, AND PERIODS OF LIFE.

As to the frequency of hæmoptysis in the two sexes, our record of cases is not sufficiently accurate to deduce any very positive conclusions from them. The statements, therefore, which follow are drawn from the report of cases that have occurred at the Hospital for Consumptives, at Brompton, London, and Dr. John Ware's excellent paper on "Hæmoptysis as a Symptom."

From Dr. Ware's table, exhibiting the age and sex of 317 cases, we learn that previous to the age of twenty years, females are more liable to hæmoptysis than males, in the proportion of 130 to 13; that during the next ten years the number preponderates in favor of the males, 49 to 28 females; during the next, the numbers are nearly equal, 20 to 28; while from the fiftieth to the sixtieth year it is once more greatly on the side of the females, 13 to 5 males.

"Whether," says Dr. Ware, "this has any connection with a disturbance in the balance of the circulation at the two periods during which there is an excess in the number of females connected with the establishment, and cessation of the functions of the uterus, is an interesting question."

In regard to the relation of hæmoptysis to the different stages of phthisis, we glean the following from the Brompton reports: In the first stage, hæmoptysis was present 28 times in 39 cases; in the second, 18 times in 20 cases; and in the third, 57 in 69 cases: making 71.79 per cent. in the first, 90 in the second, and 82.61 in the third.

When, however, the analysis is made from the table of the sex, the proportion is somewhat different. We then find that the increase in frequency, during the third stage, preponderates in favor of the males. Thus in the following table we have—

MALES.	NO. OF CASES	FREQUENCY.	PER CENT.
1st stage	18	12	66.66
2d and 3d stage	56	49	87.50
FEMALES.			
1st stage	21	16	79.19
2d and 3d stage	33	26	79.78

Hence it will be seen that the frequency during the first and second stage is considerably greater in men than in women, which may be fairly explained by the great bodily labor and increased tax upon the pulmonary circulation in the former than the latter. It also has a tendency to lead to the inference, that the existing influence of the tubercular cachexia itself, in producing hæmoptysis, is greater than of its secondary results.

From Dr. Ware's report, we may also infer that the seasons of the year have an influence in producing hæmoptysis. Thus, from a table showing the months in 355 cases, we find that the first attack of hemorrhage occurred in a much larger number of cases during cold weather. The greater number of cases, 38 and 39, occurred in March and November respectively; the smaller number, 18, in June. The season of the year in which the largest number of cases recorded, may be denominated the transition seasons, Spring and Autumn, which gave, respectively, 101 and 102. Those in which the smallest number are recorded, were the equable seasons, winter and summer—which gave respectively, 83 and 69.

As to the more exciting causes which produce hæmoptysis in pulmonary tuberculosis, we know but little. Patients, when interrogated on the subject, can seldom state any thing which seems likely to have acted as an exciting cause. In a large proportion of cases it occurs unexpectedly, without any premonition. Sometimes it will occur after an unusual effort of the chest, either in lifting or running; but I have frequently known it to occur at night, when the patient was in bed; he would be aroused from his slumbers, and find the blood flowing from his mouth in alarming quantities.

III.—DIAGNOSIS OF PHTHISICAL HÆMOPTYSIS. CASES ILLUSTRATING THE SAME.

Hæmoptysis may arise from other conditions of the system than pulmonary tuberculosis; such as plethora, or congestion, with pneumonitis; from external violence, as blows, and accidents of any kind; from violent muscular action; from disease of the heart, and from the suppression of some accustomed evacuation. All of these causes may produce it in certain conditions of the system, and I do not regard it a difficult thing to distinguish phthisical hæmoptysis from that which proceeds from other sources.

Let me cite two or three cases to illustrate the mode of diagnosis. Here we have a case of pulmonary tuberculosis, which has advanced to the third stage, and the first intimation we have of it is a profuse hæmoptysis.

W. Y., aged twenty-four, a farmer by occupation, of the nervo-bilious temperament; an individual of unusual physical energy. After having been engaged for two days in handling heavy sacks of grain, was suddenly seized, on the evening of the second day, with a very copious expectoration of blood. When I saw him the same evening, he had a very feeble pulse, hurried breathing, cold and clammy skin, with occasional syncope. The amount of blood lost was estimated at four pounds.

And to add to the danger of his case, a few moments after I arrived, profuse vomiting and purging ensued, from the effects of a large quantity of chloride of sodium, which he had taken by the advice of some friend to stop the hemorrhage. From these two causes he appeared to be on the eve of dissolution for several days. But by the persevering use of stimulants, tonics, and a generous diet, he gradually improved, and in four weeks was able to leave his bed.

His health had always been good up to the occurrence of the hæmoptysis. He had no hereditary title to phthisis. As his strength improved, he complained of a constant pain in the right breast just above the nipple. His pulse continued frequent, and his breathing hurried. He had cough, and expectorated muco-purulent matter streaked with blood. Symptoms of hectic were pronounced. Thompson's gingival margin was clearly defined upon the gums; his mind was hopeful, and his conversation very animated; thought he would be well in a week or two.

A physical exploration of his chest showed the expansion movements of the two sides unequal. During inspiration there was scarcely any motion in the upper part of the right side. Percussion yielded a dull sound over the right side of the chest, with the exception of just below the clavicle. Here a smart stroke, when the patient's mouth was opened, elicited a cracked pipkin sound, *bruit de pot fêlé*. On auscultation in the same region cavernous respiration was marked, pointing out the existence of a cavity in the superior lobe of the lung. On the left side the physical signs were normal, with the exception of the

prolonged expiratory murmur, an unfailing sign of commencing tubercular infiltration, and all its destructive consequences.

The hæmoptysis never occurred again but once, and then only to the amount of two or three ounces. The disease, however, pursued its undeviating way to a speedy and fatal termination. He emaciated rapidly, and with occasional attacks of pleuritis, night sweats, diarrhea, a troublesome cough, and distressing paroxysms of dyspnœa, his tempest-tossed spirit was wafted into the haven of eternal rest. He died in four months from the first hemorrhage.

Post-mortem verified the diagnosis. The superior lobe of the right lung was entirely disorganized. It was a vast cavity, containing pus and a few small clots of blood. The middle and inferior lobe were infiltrated with tubercular matter in various stages of softening. The pleura was adherent in several places. In the superior lobe of the left lung, there was gray tubercular matter in various stages of softening, but no cavities. The inferior lobe was congested, but presented no appearance of tubercular deposits. The bronchi were red, but free from ulceration. Heart rather small in volume, parietes of the left ventricle thinner than usual; aorta healthy. The other organs of the body, so far as examined, were healthy, except the small intestines, which in places exhibited tubercles in nearly every stage, with numerous indurations and ulcers.

This case was unique in three particulars. *First*, In the suddenness of its development. The tubercular disease had proceeded to the third stage before the patient manifested any symptoms of failing health. I made particular inquiry on this point, and, so far as I could learn, he made no complaints of trouble in the chest or failing strength. *Second*, The hemorrhage was very profuse, from the nature and extent of the pulmonary lesion; for it has been well established by pathological research, that hæmoptysis is not a common sequence of large tubercular cavities. *Third*, The rapidity with which the malady proved fatal, eighteen months being the average duration of the disease in males. In this case it no doubt proved fatal in six months from the first stage.

The next case is one of hæmoptysis caused by suppression of the catamenia.

June 22, 1855, called to see Miss S., aged 23, of the nervo-san-

guineous temperament. This morning, on rising, complained of dyspnœa, accompanied with pain in the chest, which was soon followed by a profuse flow of blood from the mouth, which amounted in quantity to about sixteen ounces. After the hemorrhage ceased, the dyspnœa and pain were in a measure relieved. Pulse 75 per minute, and respiration 18; skin sallow, moist, and cool; bowels costive and tender; spine tender to the touch; nervous system excitable; has had several paroxysms of hysteria during the last two months; appetite not good for a long time; pain in the head and back; a dry cough, and suppression of the catamenia for the last six months.

Physical Signs.—No dulness on percussion. Auscultation elicits nothing abnormal, but mucous rhonchi with unequal bubbles, not unlike those in bronchial catarrh, only much louder, from which we conclude that the liquid material in the bronchial tubes is more fluid than mucus; hence it is blood, and the diagnosis is bronchial hemorrhage.

Treatment.—Enjoined rest, and prescribed mass. pill. hyd., gr. x., to be followed in six hours by castor oil, one ounce, and oil of turpentine one drachm. Dry cupping to the sacrum.

June 23. Called this morning at 3 o'clock. Patient awoke at 2 o'clock, and found the blood flowing from her mouth, and the bed clothes quite wet with it. The quantity could not be estimated. A short time after this she took a hysterical paroxysm, and had not recovered from it when I arrived. Inhalations of chloroform soon relieved her from this, and as her bowels had not been moved, the castor oil and turpentine were repeated. During the afternoon her bowels were freely moved, and at night an anodyne was prescribed.

24th. Patient rested well during the night. No return of hemorrhage. As there was still tenderness of the bowels on pressure, ordered twelve drops of turpentine every six hours.

26th. Much better every way; prescribed iron, quinine, and strychnine.

28th. Symptoms all better. In addition to iron, &c., ordered ten drops of the oil of savin, with the warm hip bath every evening.

July 10th. Patient still improving. Had a free catamenial discharge yesterday, which still continues to-day, moderate in amount.

From this time she gradually regained her health; subsequently married, and is now the mother of six children. The hæmoptysis in this case was vicarious, and exuded from the bronchial mucous membrane, and was permanently relieved by a restoration of the catamenia.

The following case of pregnancy, complicated with hæmoptysis, I shall ever remember for the sorrow it caused in a once happy family, where I delighted to spend a pleasant day, retired from the toils and cares of professional life.

Miss — was a young woman of rare beauty and accomplishments. Her social and moral position in society, and the sweetness of her disposition, joined with the most perfect amiability of character, caused her to be admired and loved by all who enjoyed her society. But the seducer came in the garb of an angel of light, and she fell a victim to his machinations. After spending the winter in a neighboring city, enjoying the gaities and frivolities of fashionable life, she returned home about the first of March, pale and somewhat emaciated, with a distressing cough, attended at times with profuse hæmoptysis. Dr. C., the family physician, was called in, and attended her until the first of May, during which time there was little alteration in her condition. Dr. C. regarded her case as phthisis, and having exhausted his stock of therapeutics, I was invited to meet him in consultation.

I found her feeble; countenance pale and dejected; pulse eighty; respiration, twenty; tongue, moist and clean; bowels regular; appetite good, excepting in the morning; no fever; slight dyspnoea on lying down; no pain in the chest; Thompson's gingival margin not present upon the gums. Hæmoptysis recurs about once in seven days; quantity estimated at four ounces. In the meantime the cough is troublesome, and attended with mucous expectoration. Percussion of the chest yields no dullness; and auscultation nothing but mucous rhonchi. The respiratory murmurs were distinct, clear, and free. While engaged in exploring the chest, my attention was attracted by the unusual size of the breasts, and the deep blue of the areola around the nipple. This circumstance lead to a careful examination of the abdomen, and her pregnancy was readily made out by the motions of the fœtus and the pulsations of the heart. She was in the fifth month of her gestation, and up to this time it had not been discovered by Dr. C. nor her family.

The cough and hæmoptysis were entirely relieved in two weeks by the following :

R	Tinct. Ext. Cannabis Indica,	} aa. f 3 jj.	M.
	Syrup Tolu,		
	Sulp. Morphia.		
		gr. i.	

Sig. A teaspoonful three times a day after meals.

From this time no untoward symptoms occurred. Her labor was natural; made a good recovery, and has never manifested any lung trouble since, after a period of nearly twenty years.

During a medical experience of more than thirty-three years, I have met with several cases of pregnancy attended with hæmoptysis, where there was no tubercular affection of the lungs. This is more frequently the case in first pregnancies, and it behooves the physician to be on his guard—to exercise great care in his diagnosis and prognosis. Let him examine his patient rigidly, explore faithfully the condition of every organ, never trusting to a simple examination, nor take for granted every statement the patient may make in regard to her case.

I am acquainted with some practitioners who are too negligent in this particular. They will visit a patient, feel his pulse, look at his tongue, ask a few general questions as to his pains, and in a hurried manner make out a prescription, and depart without having the remotest conception of the true nature of the patient's malady. Nothing but such haste and carelessness could have betrayed Dr. C. into so flagrant an error in his diagnosis of the case just cited, thus injuring his own reputation, and bringing a reproach upon the profession to which he belongs.

And it is just here that unprincipled quacks sometimes achieve their greatest triumphs. They take advantage of the errors of scientific physicians, and by an indefinable assumption of superior gravity and wisdom impose upon the ignorant, and supplant the regular attendant; and will not readily yield the downy couch of charlatantry for that of truth and justice. Accustomed to the ignoble fruit of deception, they summon to their aid every device that is a stranger to the manly breast; they reap a rich harvest from the ills of suffering humanity. To remove these loathsome pests from society the scientific physician must be constantly on his guard; and if every member of the profession will do his duty, the day is not far distant when society will cease to be cursed with such hordes of medical impostors and mountebanks.

General Inferences.—1st. Hæmoptysis is the most significant of any of the single symptoms of pulmonary tuberculosis.

2nd. That it is rarely fatal—nature having taken great care to prevent such a result.

3rd. That commonly those patients who experience hæmoptysis moderate in amount, live longer than those who do not; hence it is rather beneficial than otherwise, by removing congestion and intercurrent inflammations.

4th. On the other hand, when frequent and profuse, it will have a tendency to weaken the system, and add very much to the tubercular habit, and thus cause a more speedy termination of the disorder. A profuse hæmorrhage in the third stage has been known to prove instantly fatal.

5th. That phthisical patients, previous to the age of puberty, seldom have hæmoptysis. After this period, up to the age of twenty-five, females are more liable to it than males, particularly in the first stage of the disease, but in the second and third stages it frequently preponderates in favor of males.

6th. That no individual, who once has had hæmoptysis, however slight, can afterward be regarded as entirely safe from the dangers of pulmonary tuberculosis. It may, however, as already remarked, occur from other causes, but it is so rare, excepting in heart disease, that it points most commonly to the true nature of the case. Indeed, hæmoptysis is so frequent from tubercular disease that its occurrence will naturally bring with it the presumption, that where it is present tubercular deposits also exist in the lungs.

IV. TREATMENT OF PHTHISICAL HÆMOPTYSIS.

This should be conducted with great care. When the hæmorrhage is moderate in amount, and does not occur often, I am not very anxious to check it, and therefore desist from all active measure. When it is considerable, and of an active character, prompt treatment is demanded. If the tubercular disease is in the first stage, and the patient is plethoric, with a hard, full pulse, high bodily temperature, hurried breathing, and pain just under the sternum, nothing will arrest the bleeding quicker than cupping just under each axilla, and the internal use of large doses of sulphate of magnesia and sulphuric acid. The following is a convenient formula :

℞	Infus. Rosar Compos.	f 3 vi.	M.
	Acid Sulph. Aromat.	f 3 jj.	
	Magnesia Sulph.	3 j.	

Sig. A teaspoonful every hour.

When this form of hæmoptysis proves obstinate, I have in some cases prescribed, with advantage, Dr. Dobell's formula, so highly recommended by Niemeyer in his *Lectures on Pulmonary Tuberculosis*:

℞	Fluid Ext. Ergot	f 3 ij.	M.
	Tinct. Digitalis,	f 3 iij.	
	Acid Gallic,	3 j.	
	Magnesia Sulph.,	3 iv.	
	Acid Sulph. Dilut.,	f 3 j.	
	Infus. Rosar,	f 3 viii.	

Sig. One ounce every hour until the hemorrhage ceases.

A popular remedy for hæmoptysis, not only with the profession, but the laity, is a strong solution of the chloride of sodium. You cannot turn to the treatment of hæmoptysis, in any work on the practice of medicine, without reading the following stereotyped language: "One of the most efficacious remedies for hæmoptysis, and at the same time always convenient, is the chloride of sodium. It may be eaten by the teaspoonful, or drank in a strong solution; and there is no reason to dread an overdose, for if the quantity taken should offend the stomach and occasion vomiting, this will be of no injury to the patient." I have no faith in this article as a remedy for hæmoptysis. The beneficial effects attributed to it are purely imaginary. Frequent draughts of cold water will staunch a hemorrhage from the lungs just as soon. And instead of its being a harmless agent, it is sometimes attended with the most injurious consequences, producing derangements of the stomach and bowels that annoy the patient throughout the future progress of his malady. The case of W. Y. was a marked example of this kind. I have long since ceased to prescribe the chloride of sodium for phthisical hæmoptysis.

The best therapeutical agent for active hæmoptysis is the acetate of lead; it is not only a powerful astringent, but a useful sedative. In profuse hemorrhage of a threatening character, two, three, or four grains may be given every hour. When combined with opium, it has no superior as a remedy in this case; the latter is especially called for when there is considerable irritation in the air-passages, exciting cough; it should be given in full doses sufficient to quell the cough, for nothing is

so liable to keep up the hemorrhage, or cause its return, as this. Next to the acetate of lead as a remedy for active hæmoptysis, is turpentine; it is probably more suitable in a majority of instances than any that have been named. The following is a good formula for its administration :

R	Ol. Terebinthinæ,	f 3 ij.	
	Misturæ Gum Acacia,	f 3 ij.	
	Aquæ Cinnamon,	f 3 iv.	
	Tinct. Capsicum,	gtt. xxx.	M.

Sig. One ounce every hour or two according to the necessities of the case.

Some writers speak very highly of inhalations of turpentine in hæmoptysis. In the few cases in which we have administered it in this way, no obvious beneficial result has followed. In passive hæmoptysis, turpentine is a therapeutical agent of great value; for in connection with its astringent properties it contains a valuable stimulant, which is highly useful in all cases where the patient is feeble, with a frequent pulse, cold skin, and breathing rendered difficult, not only by the effusion within the air-passages, but by the want of muscular power to sustain the fatiguing efforts of respiration.

Another excellent therapeutical agent for phthisical hæmoptysis, is bugle-weed (*Lycopus Verginicus*). In protracted cases it has few equals as a remedy. Administered in the form of a strong infusion three or four times a day, it will speedily check the hemorrhage, by diminishing bronchial irritation, lessening the frequency of the pulse, mitigating the severity of the cough, and materially relieving hectic symptoms. It is also a very good tonic. I could name several cases of passive, continued phthisical hæmoptysis, that have been effectually relieved by the bugle-weed, which had resisted all the common medical agents used for that purpose. It has merits as an astringent, sedative and tonic in phthisis, that recommend it to a more extensive employment by the profession.

When there is much congestion of the lungs and bronchial tubes, and hæmoptysis is profuse, counter-irritants are in demand; mustard, ammoniated liniment, and cantharides may be employed as indicated. In passive hemorrhage, blistering will sometimes relieve when everything else fails. Years ago it was considered good practice to establish a drain on each infra-clavicular region by a succession of blisters or an issue, especially

where attacks of hemorrhage were frequent. Modern refinement in therapeutics pronounces such treatment barbarous. We cannot see it just in that light. These means often accomplish much good, and should not be entirely ignored.

After hæmoptysis has been checked, we should make use of every instrumentality in our power to prevent its return. Hence the patient should be placed in bed, having his shoulders somewhat elevated, enjoining perfect rest, and prohibiting conversation. His diet must be very simple—confined to such articles as are inviting to the stomach, easy of digestion, and at the same time nutritious. His drinks should all be cold. The temperature in which he is placed must not be high; everything calculated to excite the patient's mind should be carefully avoided; comfort his mind with the assurance that the bleeding will not prove fatal, and your work is more than half done.

THE CENSUS AND REGISTRATION REPORTS FOR 1870.

BY NATHAN ALLEN, M. D., Lowell, Mass.

These documents, just published, contain the material for very important and valuable information. If their pages are chiefly filled with figures, presented in tabular form, in a great variety of ways, and looking very uninviting, still, a careful analysis of them may give us some very important and instructive knowledge of which we should not be ignorant. Let us look at one fact, viz., *increase of population*, with particular reference in its application to the State of Massachusetts.

More than usual interest had been expressed respecting the result of the U. S. census of 1870, in as much as the country had gone through with greater changes from 1860 to 1870, than ever in any previous decade of years. There were two great events, viz., the liberation of the slave, and the war of the rebellion. What effects had these two great changes upon the increase of population? Some calculation could be made as to increase of numbers by immigration from abroad, but scarcely a conjecture could be formed as to the full extent of influence which these new and complicated changes might show in the census. Various judgments were expressed. While all ad-

mitted that the rate of increase this decade must be less than in preceding decades, there was wide difference of opinions among the best informed as to what might be the actual result.

In 1860, the population of the United States was 31,399,300, and in 1870, the new census showed it to be 38,558,371,—an increase of seven millions. According to the gain from 1840 to 1850, and 1850 to 1860, the increase in this last decade should have been between three and four millions more. This lack of increase is in part accounted for by a loss from natural increase of about one-half million of colored people, on account of the sudden changes in their liberation from slavery, and also by the loss of about one million of persons in the Union and Confederate Armies, whose deaths were occasioned by the war. Then the continuance of the war some four years calling from their homes more than a million of men, must have had a great effect upon the increase of population. But the last cause of this diminution of numbers is thus expressed in the Census Report itself:

"A fifth cause may be alluded to, namely, the notorious growth of habits of life in many sections of the country, which tend strongly to reduce the rate of national increase, and which, if persisted in, will make the showing of another census hardly so satisfactory as the present, even without a devastating war to account for the loss of hundreds of thousands in hospital and on the battle field. *No one can be familiar with life in the Eastern and Middle States generally, and in the Western cities, and not be aware that children are not born to American parents as they were in the early days of the country. Luxury, fashion, and the vice of 'boarding,' combine to limit the increase of families to a degree that in some sections have threatened the perpetuation of our native stock. This tendency is not one that requires to be brought out by statistical comparison. It is patent, palpable, and needs no proof.*"

These last sentences we have italicised, as they contain so much truth, and are clothed with the highest official authority. They confirm the correctness of statements made by the writer in various articles which have been published in different periodicals and newspapers. The words "Luxury, fashion, and the vice of 'boarding,'" are very expressive and are full of meaning; they cover a multitude of wrongs, sins—the violations of the physical and moral law. How far, or to what extent these

wrongs or violations of law may be prevented, we will not here undertake to decide, but the fact that "our native stock"—the best in many respects the world ever witnessed—should in time fail of "perpetuation," ought to teach us lessons of warning, if not instruction. It shows something wrong in the family relation, in our modes of education, and industrial pursuits, if not in the type of our present civilization and Christianity.

Let us now see how the Registration Report of births and deaths in Massachusetts harmonizes with the Census. In 1860 the population of this State was 1,131,065, and in 1865 it was 1,267,031, showing a gain of only about 37,000. But these years were war times. In the late census, 1870, it was 1,457,351, making a great gain, viz: 190,320, in these five years, viz: from 1865 to 1870. This gain is made up partly by the excess of immigration over emigration—which is nearly all of foreign origin or descent—and partly by the excess of births over the deaths. While no exact line in this last way of increase can be drawn between what is purely American, and what is foreign, some approximation can be made towards its correctness.

In 1860, the census returned 260,114, in Massachusetts, as born out of the United States, and in 1870 this class had increased to 353,319, making a gain here purely foreign of 93,205. This leaves 97,115, as the balance in the whole increase from 1860 to 1870, classed under the head of Native. But unless the terms "native" and "foreign" are carefully scrutinized, there is danger of being misled. These terms as here used refer solely to *place of birth* or nativity, and not to race or nationality. Consequently great numbers, both of children and adults, classed under the head of American because born in this country, are really foreign, that is, of foreign descent.

This class is made up of two generations extending back fifty years or more; and, from the best estimates we can make, it must amount in Massachusetts to considerably over 100,000 persons. This number must be deducted from the American column and transferred to the foreign. This change shows that, probably full one-third part of the whole population of the State is composed of this class. And not only so, but this portion is relatively increasing every year, much faster than the strictly American, as will appear by the report of births. We take the figures in the last registration report, which is a fair exhibit of previous years.

The whole number of births, 1870, was 38,250; classed as of American parentage, 15,563; foreign, 18,339; American father and foreign mother, 1,787; foreign father and American mother 2,256. These are nearly all of foreign descent, as there is but little intermarrying between the strictly American and foreign. The terms "American," and "foreign," as used here denote simply the place of birth. Then these should be added to the foreign column, making over 22,000. But this is not all. A large number of births classed among those of American parentage, are strictly of foreign descent, styled here American simply because the parents were born in this country. What may be the exact number of this class, it is impossible to decide, but in all probability, it amounts to two or three thousand. From the above figures, then, it is evident that the number of births of foreign descent in this State is considerably more than is reported, in fact it is almost twice as large as the strictly American. Now, admitting that the mortality is much larger in the former class than in the latter, there is a wide margin for much more increase with the foreign. Besides, a careful examination of the increase of population in the State by the last census report, shows that this gain is confined almost exclusively to those towns and cities containing a large foreign element, and that in whatever towns or places there has been a decrease of numbers, or but little increase, the population is almost entirely American.

A great change is taking place, not merely in the numbers but in the character of our people. The country towns and rural districts, the places remote from railroads and marts of trade, are becoming deserted to enlarge our villages and cities. Nearly all our manual labor, whether domestic, agricultural or mechanical, is now being performed by those of foreign birth or descent. Says the compiler of this registration report:

"The character of our population is undergoing a great change. Surely, and not very slowly, a mixed stock of Irish, German and Canadians, is taking the place of the purely English stock which has possessed Massachusetts for more than two centuries. The tide of immigration flows the stronger with an increasing wealth and general prosperity. There is much hard work to be done, unskilled labor is in demand, and Americans are not ready or willing to supply it from their own ranks.

These are facts for the statesman, the educator and the moralist. What is to be the final result of these changes, time only can determine.

Connected with the Bureau of Education at Washington, established by Government, a pamphlet has recently been published upon Vital Statistics. In this document we find some valuable tables and diagrams, showing the birth and death rate in different States, and at different periods of time. Dr. J. M. Toner, the compiler, in explaining and commenting upon these tables, has these remarks: "With a desire to view this question of birth-rate from a stand-point that would be sufficiently comprehensive, and yet free from even the appearance of preconceived notions or sectional partiality, I have made something of a study of what the records of the United States census teach upon the subject of population, in its enumeration by ages: also of births, deaths, etc. From this source I find undoubted evidence of a gradual decline in the proportion of children under 15, to the number of women between 15 and 50 years of age in our country. I do not propose to adopt any theory, or to explain this extraordinary condition. But it is proper that the profession and the country should be made acquainted with the facts, and made to realize that *the American people in this particular, are showing unmistakable signs of physical degeneracy. I have embodied facts only, and leave the enlightened understanding of the American people to assign the reasons from the evidence everywhere around them, and to supply the remedy.* Dr. Allen, of Lowell, Mass., has written several able papers, and done good service to the country and humanity, by calling attention to this subject."

In the Popular Science Monthly, for August, is an article "On the Causes of Physical Degeneracy, by Dr. A. K. Gardner, of New York," in which he arrives at results similar to the statements in the above papers, and also makes a complimentary allusion to the writer. However pleasant such references (and we might cite many others) may be personally, we are more gratified in finding that the conclusions formed many years since are being confirmed by such high authorities, and when we see the community waking up "to apply the remedy" to these evils, it will afford us far higher gratification.

THE POSITION OF WOMEN.

From "History of European Morals," by WILLIAM EDWARD HARTPOLE
LECKY, M. A.

There are few more curious subjects of enquiry than the distinctive differences between the minds and characters of men and women, and the manner in which those differences have affected the ideal types of different ages, nations, philosophies, and religions. Physically, men have the indisputable superiority in strength, and women in beauty. Intellectually, a certain inferiority of the female sex can hardly be denied when we remember how almost exclusively the foremost places in every department of science, literature, and art have been occupied by men; how infinitesimally small is the number of women who have shown in any form the very highest order of genius; how many of the greatest men have achieved their greatness in defiance of the most adverse circumstances; and how completely women have failed in obtaining the first position, even in music or painting, for the cultivation of which their circumstances would appear most propitious. It is as impossible to find a female Raphael, or a female Handel, as a female Shakspeare or Newton. Women are intellectually more desultory and volatile than men; they are more occupied with particular instances than with general principles; they judge rather by intuitive perceptions than by deliberate reasoning or past experience. They are, however, usually superior to men in nimbleness and rapidity of thought, and in the gift of tact, or the power of seizing speedily and faithfully the finer inflexions of feeling, and they have therefore often attained very great eminence as conversationalists, as letter-writers, as actresses, and as novelists.

Morally, the general superiority of women over men is, I think, unquestionable. If we take the somewhat coarse and inadequate criterion of police statistics, we find that, while the male and female populations are nearly the same in number, the crimes committed by men are usually rather more than five times as numerous as those committed by women; and although it may be justly observed that men, as the stronger sex, and the sex upon whom the burden of supporting the family is thrown, have more temptations than women, it must be remembered, on the other hand, that extreme poverty which verges upon starvation is most common among women, whose means of livelihood are most restricted, and whose earnings are smallest and most precarious. Self-sacrifice is the most conspicuous element of a virtuous and religious character, and it is certainly far less common among men than among women, whose whole lives are usually spent in yielding to the will and consulting the pleasures of another. There are two great departments of virtue: the impulsive, or that which springs spontaneously from the emotions; and the

deliberate, or that which is performed in obedience to the sense of duty; and in both of these I imagine women are superior to men. Their sensibility is greater, they are more chaste both in thought and act, more tender to the erring, more compassionate to the suffering, more affectionate to all about them. On the other hand, those who have traced the course of the wives of the poor, and of many who, though in narrow circumstances, can hardly be called poor, will probably admit that in no other class do we so often find entire lives spent in daily persistent self-denial, in the patient endurance of countless trials, in the ceaseless and deliberate sacrifice of their own enjoyments to the well-being or the prospects of others. In active courage, women are inferior to men. In the courage of endurance, they are commonly their superiors; but their passive courage is not so much fortitude which bears and defies, as resignation which bears and bends. In the ethics of intellect, they are decidedly inferior. To repeat an expression I have already employed, women very rarely love truth, though they love passionately what they call "the truth," or opinions they have received from others, and hate vehemently those who differ from them. They are little capable of impartiality or of doubt; their thinking is chiefly a mode of feeling; though very generous in their acts, they are rarely generous in their opinions, and their leaning is naturally to the side of restriction. They persuade rather than convince, and value belief rather as a source of consolation than as a faithful expression of the reality of things. They are less capable than men of perceiving qualifying circumstances, of admitting the existence of elements of good in systems to which they are opposed, of distinguishing the personal character of an opponent from the opinions he maintains. Men lean most to justice, and women to mercy. Men are most addicted to intemperance and brutality, women to frivolity and jealousy. Men excel in energy, self-reliance, perseverance, and magnanimity; women in humility, gentleness, modesty, and endurance. The realising imagination which causes us to pity and to love is more sensitive in women than in men, and it is especially more capable of dwelling on the unseen. Their religious or devotional realizations are incontestably more vivid; and it is probable that, while a father is most moved by the death of a child in his presence, a mother generally feels most the death of a child in some distant land. But though more intense, the sympathies of women are commonly less wide than those of men. Their imaginations individualize more; their affections are, in consequence, concentrated rather on leaders than on causes; and if they care for a great cause, it is generally because it is represented by a great man, or connected with some one whom they love. In politics, their enthusiasm is more naturally loyalty than patriotism. In history, they are even more inclined than men to dwell exclu-

sively upon biographical incidents or characteristics as distinguished from the march of general causes. In benevolence, they excel in charity, which alleviates individual suffering, rather than in philanthropy, which deals with large masses, and is more frequently employed in preventing than in allaying calamity. *

The general superiority of women to men in the strength of their religious emotions, and their natural attraction to a religion which made personal attachment to its Founder its central duty, and which imparted an unprecedented dignity and afforded an unprecedented scope to their characteristic virtues, account for the very conspicuous position they assumed in the great work of the conversion of the Roman Empire. In no other important movement of thought was female influence so powerful or so acknowledged. In the ages of persecution, female figures occupy many of the foremost places in the ranks of martyrdom, and Pagan and Christian writers alike attest the alacrity with which women flocked to the Church, and the influence they exercised in its favor over the male members of their families. The mothers of St. Augustine, St. Chrysostom, St. Basil, St. Gregory Nazianzen, and Theodoret, had all a leading part in the conversion of their sons. St. Helena, the mother of Constantine, Flaccilla, the wife of Theodosius the Great, St. Pulcheria, the sister of Theodosius the Younger, and Placidia, the mother of Valentinian III., were among the most conspicuous defenders of the faith. In the heretical sects the same zeal was manifested, and Arius, Priscillian, Montanus were all supported by troops of zealous female devotees. In the career of asceticism, women took a part little if at all inferior to men, while in the organization of the great work of charity they were pre-eminent. For no other field of active labor are women so admirably suited as for this; and although we may trace from the earliest period, in many creeds and ages, individual instances of their influence in allaying the sufferings of the distressed, it may be truly said that their instinct and genius of charity had never before the dawn of Christianity obtained full scope for action. * *

It can hardly, I think, be questioned that in the great religious convulsions of the sixteenth century, the feminine type followed Catholicism, while Protestantism inclined more to the masculine type. Catholicism alone retained the Virgin worship, which at once reflected and sustained the first. The skill with which it acts upon the emotions by music, and painting, and solemn architecture, and imposing pageantry; its tendency to appeal to the imagination rather than the reason, and to foster modes of feeling rather than modes of thought; its assertion of absolute and infallible certainty; above all, the manner in which it teaches its votary to throw himself perpetually on authority, all tended in the same direction. It is the part of a woman to lean, it is the part of a man to stand. A religion which prescribed to the distracted

mind unreasoning faith in an infallible Church, and to the troubled conscience an implicit trust in an absolving priesthood, has ever an especial attraction to a feminine mind. A religion which recognized no authority between man and his Creator, which asserted at once the dignity and the duty of private judgment, and which, while deepening immeasurably the sense of individual responsibility, denuded religion of meretricious ornaments, and of most æsthetic aids, is pre-eminently a religion of men. Puritanism is the most masculine form that Christianity has yet assumed. Its most illustrious teachers differed from the Catholic saints as much in the moral type they displayed as in the system of doctrines they held. Catholicism commonly softens while Protestantism strengthens the character; but the softness of the first often degenerates into weakness, and the strength of the second into hardness. Sincerely Catholic nations are distinguished for their reverence, for their habitual and vivid perceptions of religious things, for the warmth of their emotions, for a certain amiability of disposition, and a certain natural courtesy and refinement of manner that are inexpressibly winning. Sincerely Protestant nations are distinguished for their love of truth, for their firm sense of duty, for the strength and the dignity of their character. Loyalty and humility, which are especially feminine, flourish chiefly in the first; liberty and self-assertion in the second. The first are most prone to superstition, and the second to fanaticism. Protestantism, by purifying and dignifying marriage, conferred a great benefit upon women; but it must be owned that neither in its ideal type, nor in the general tenor of its doctrines or devotions, is it as congenial to their nature as the religion it superseded.

Its complete suppression of the conventual system was also, I think, very far from a benefit to women or to the world. It would be impossible to conceive any institution more needed than one which would furnish a shelter for the many women who, from poverty, or domestic unhappiness, or other causes, find themselves cast alone and unprotected into the battle of life, which would secure them from the temptations to gross vice, and from the extremities of suffering, and would convert them into agents of active, organized, and intelligent charity. Such an institution would be almost free from the objections that may justly be urged against monasteries, which withdraw strong men from manual labor, and it would largely mitigate the difficulty of providing labor and means of livelihood for single women, which is one of the most pressing, in our own day one of the most appalling, of social problems. Most unhappily for mankind, this noble conception was from the first perverted. Institutions that might have had an incalculable philanthropic value were based upon the principle of asceticism, which makes the sacrifice, not the promotion, of earthly happiness its aim, and

binding vows produced much misery and not a little vice. The convent became the perpetual prison of the daughter whom a father was disinclined to endow, or of young girls who, under the impulse of a transient enthusiasm, or of a transient sorrow, took a step which they never could retrace, and useless penances and contemptible superstitions wasted the energies that might have been most beneficially employed. Still it is very doubtful whether, even in the most degraded period, the convents did not prevent more misery than they inflicted, and in the Sisters of Charity the religious orders of Catholicism have produced one of the most perfect of all the types of womanhood. There is, as I conceive, no fact in modern history more deeply to be deplored than that the Reformers, who in matters of doctrinal innovations were often so timid, should have levelled to the dust, instead of attempting to regenerate, the whole conventual system of Catholicism. * * * *

I will conclude by observing that of all the departments of ethics, the questions concerning the relations of the sexes and the proper position of women, are those upon the future of which there rests the greatest uncertainty. History tells us that as civilization advances, the charity of men becomes at once warmer and more expansive, their habitual conduct both more gentle and more temperate, and their love of truth more sincere; but it also warns us that in periods of great intellectual enlightenment, and of great social refinement, the relations of the sexes have often been most anarchical. It is impossible to deny that the form which these relations at present assume has been very largely affected by special religious teaching, which, for good or for ill, is rapidly waning in the sphere of government, and also, that certain recent revolutions in economical opinion and industrial enterprise have a most profound bearing upon the subject. The belief that a rapid increase of population is always eminently beneficial, which was long accepted as an axiom by both statesmen and moralists, and was made the basis of a large part of the legislation of the first, and of the decisions of the second, has now been replaced by the directly opposite doctrine, that the very highest interest of society is not to stimulate but to restrain multiplication, diminishing the number of marriages and of children. In consequence of this belief, and of the many factitious wants that accompany a luxurious civilization, a very large and increasing proportion of women are left to make their way in life without any male protector, and the difficulties they have to encounter through physical weakness have been most unnaturally and most fearfully aggravated by laws and customs which, resting on the old assumption that every woman should be a wife, habitually deprive them of the pecuniary and educational advantages of men, exclude them absolutely from very many of the employments in

which they might earn a subsistence, encumber their course in others by a heartless ridicule or by a steady disapprobation, and consign, in consequence, many thousands to the most extreme and agonizing poverty, and perhaps a still larger number to the paths of vice. At the same time a momentous revolution, the effects of which can as yet be but imperfectly descried, has taken place in the chief spheres of female industry that remain. The progress of machinery has destroyed its domestic character. The distaff has fallen from the hand. The needle is being rapidly superseded, and the work which, from the days of Homer to the present century, was accomplished in the centre of the family, has been transferred to the crowded manufactory.

The probable consequences of these things are among the most important questions that can occupy the moralist or the philanthropist, but they do not fall within the province of the historian. That the pursuits and education of women will be considerably altered, that these alterations will bring with them some modifications of the type of character, and that the prevailing moral notions concerning the relations of the sexes will be subjected in many quarters to a severe and hostile criticism, may safely be predicted. Many wild theories will doubtless be propounded. Some real ethical changes may perhaps be effected, but these, if I mistake not, can only be within definite and narrow limits. He who will seriously reflect upon our clear perceptions of the difference between purity and impurity, upon the laws that govern our affections, and upon the interests of the children who are born, may easily convince himself that in this, as in all other spheres, there are certain eternal moral landmarks which never can be removed.

TREATMENT OF FEVER.

In severe cases of fever, what our efforts should be principally directed to avert is stagnation of the blood in the small vessels, and cessation of the capillary circulation over a considerable part of the body. The principal cause of this is failure of the heart's action. During the critical period, it may be necessary to excite the organ to increased action by the administration of stimulants, and it is very important to watch carefully for any indications of approaching failure.

As bearing upon the important question of restraining extreme heat of the body in disease, we must remember that, whereas the nitrogen-containing tissues are hardly consumed at all in circumstances of health, the febrile state involves a large destruction of them, and this at a time when, from the state of appetite and primary digestion, scarcely any supplies of nitrogenous food can be taken into the system. Every additional

degree of fever heat implies so much additional destruction of the most important organs of the body, including the heart and the nerve centers. Excessive heat does not mean plenty of strength, but exactly the opposite; it is an absolute proof that the reserve forces of the body are exceedingly low, and are being constantly and rapidly reduced.

It is a fact which no theory can alter, that, if the temperature of the body rise up to, or above 107 deg. death is imminent; partly from the effect of the excessive heat on the vitality of organs, and partly from the excessive tissue-change which must be going on to produce this heat. Excessive and very rapid rise of temperature is seen more frequently in acute rheumatism than in any other disease. Dr. Wilson Fox relates a case in which, when the temperature was 107 deg. in the rectum, the patient was placed in a bath at 96 deg.; the heat, however, continuing to rise to 110 deg. in the rectum, ice water was used and ice placed down the spine. In half an hour the temperature was reduced to 103.6 deg., and in another half hour to 99.5. During this time six ounces of brandy were given, and subsequently eighteen ounces a day for several days.

The statistics published in Germany, comprising more than a thousand cases of typhoid fever, treated in various hospitals, show that the mortality in that disease has been reduced by more than one-half by the cooling treatment. This consists in not allowing the temperature to rise above a certain standard. If it does, it is at once lowered by baths or other means. This method of treatment is, therefore, not directed against the disease itself, but simply against a symptom, upon which a series of other symptoms depend. The patient is not plunged in a cold bath, but in one ten degrees below the heat of his body. It is only in certain cases that the use of absolutely cold water or ice is required. As many as ten or twelve baths in the twenty-four hours, are sometimes required in order to keep down the excessive fever heat.

There can be no doubt that some cases prove fatal simply from the excessive temperature of the body, consuming the tissues so rapidly. No case can long go on favorably with a temperature of say 106 deg., and as it is proved by a considerable amount of experience, especially in Germany, that an excessive temperature may, without any danger, be lowered artificially, this plan of treatment is imperatively called for in cases where an excessive temperature exists. Withdrawal of heat must, however, be practiced with judgment, and not too rapidly, as the temperature will then swing back to, and even beyond its former place. The rule ought to be, that the withdrawal of heat should be the slowest possible for the due attainment of our end. The patient should be placed in a bath of 100 deg., and the temperature of this gradually lowered, so that no shock is given to the system.

On the removal from the bath, quinine in doses of from five to twenty grains, according to circumstances, as advocated by Binz, will arrest the rapid reproduction of heat. This mode of treatment requires the incessant use of the thermometer, and the personal supervision of the medical attendant. A very interesting and successful illustrative case is related: it was one of cerebral rheumatism, which had supervened upon an ordinary attack of rheumatic fever, without heart affection. The temperature was 105.8 deg. A bath not being at hand, ice was put in five wide-necked bottles, and placed in bed, close to the body, and ice also applied to the head. The cold was thus applied partially, and the same effect produced as by a less degree of cold applied to the whole surface of the body.—*Braithwaite*.

LECTURE ON THE LOCAL AND GENERAL SYMPTOMS OF CONTRACTED GRANULAR KIDNEY.

By GEORGE JOHNSON, M. D., F. R. S., Physician to King's College Hospital; Professor of Medicine in King's College, London, etc.

There are few diseases equally serious, whose progress is so insidious as that of the disease which we are now considering; yet there are few maladies whose presence is indicated by more unequivocal signs, if only they be diligently and intelligently sought for.

One of the earliest symptoms, in the majority of cases, is *increased frequency of micturition*, and especially during the night. The more frequent call to empty the bladder may be a result of a more copious secretion of urine and consequent distention of the bladder, or it may be due to irritation of the bladder by some abnormal quality of the secretion. This symptom is sometimes absent, and it may result from other causes than renal disease. When present, it serves to direct attention to the urinary organs; and it is a symptom which should never be neglected.

Pain in the back is not a frequent or an important symptom. In many cases, it is entirely absent; and often it is not spoken of until the patient's attention has been directed to the subject. When present, it is more frequently muscular than renal—an aching pain in fatigued and feeble lumbar muscles, and often complained of by debilitated patients who have no renal disease. In numerous instances, a patient in the advanced stage of incurable degeneration of the kidney, has said: "I cannot understand how my kidneys can be diseased, since I have never had pain in them."

Dyspepsia is frequently associated with this form of disease, sometimes as a cause, sometimes as a consequence. You may

often learn that a patient of strictly temperate habits, has for months or years, suffered from pain or uneasiness after food, flatulent distension of stomach and bowels, occasional nausea and vomiting, habitual looseness or irregularity of bowels, constipation and diarrhea alternately. With this there is often turbidity of the urine, which is high colored, excessively acid, and deposits urates abundantly. After a time, the urine, which had been scanty, becomes more copious, of pale color, of low specific gravity, and is found to contain albumen and granular casts. In such a case, probably renal degeneration is a consequence of the long continued elimination of products of faulty digestion through the kidneys. I have seen this sequence of events so frequently, that I have no doubt as to their causative relationship. Dyspeptic symptoms, such as I have described, and consequent renal degeneration, are in some cases excited or greatly aggravated by habitual excess of alcohol—less frequently, perhaps, by excessive smoking of tobacco.

In other cases dyspepsia is a *consequence* of advanced renal degeneration. Urea and other urinary products are vicariously excreted by the mucous membrane of the stomach and bowels, in consequence of the defective action of disorganized kidneys. The gastric secretions are deranged; the digestive functions are disordered, and nausea, vomiting, and diarrhea, are amongst the results of this secondary renal dyspepsia.

The chronic degeneration of the kidney which we are now considering is often preceded and accompanied by such symptoms as the following; a gradual loss of energy, with emaciation to a variable extent; unusual fatigue after exertion, with a tendency to rheumatic pains and cramp in the feeble and fatigued muscles; defective perspiration, with a dry and harsh state of the skin; a peculiar pallid or sallow complexion, and a watery condition of the conjunctiva, or of the connective tissue beneath it. Pallor is not a constant symptom; there is sometimes a florid complexion even in the advanced stages of this form of degeneration. The tongue is sometimes dry; at other times moist and pale. There is often thirst, with loss of appetite and some of the dyspeptic symptoms before mentioned. Not unfrequently there is pain, or a sense of weight in the head; sometimes a tendency to drowsiness, and occasional dimness of sight.

Whenever symptoms such as I have described are complained of, the urine should be carefully examined. I need not repeat what I said in the earlier part of this lecture, of the indications afforded by the urine from the earliest to the latest stage of this form of renal degeneration.

Dropsy, as I have before told you, is not a prominent symptom in this form of disease. In the majority of cases, it is absent throughout the whole progress of the malady. Excluding those

cases in which there is the complication of valvular disease of the heart, I found that, of thirty-three fatal cases of contracted kidney, there had been dropsy in only fourteen, the proportion being 42 per cent.; and in most of these fourteen cases the dropsy was only slight and partial, coming on towards the close of the illness. (See a paper on the Forms and Stages of Bright's Disease, *Med. Chir. Trans.*, vol. xlii.) The comparative infrequency of dropsy is explained by the free, and often copious secretion of urine, which, as a rule, is not highly albuminous. There is not so great a deficiency of the normal blood-constituents in this form of disease, as in most acute cases and in other forms of chronic disease. The specific gravity of the blood-serum is less reduced, and the proportion of water to solids less excessive. An excess of urea, however, is often found in the blood, especially in the later stages, when the secretion of urine becomes scanty.

Hypertrophy of the heart occurs in a large proportion of cases of contracted kidney, when the disease has reached an advanced stage. In some cases, valvular disease, in others, atheromatous and calcareous degeneration of the walls of the large arteries, suffices to explain the hypertrophy; but in other cases, as Dr. Bright pointed out more than thirty years ago, there is no such obvious explanation of the hypertrophy, which affects chiefly the left ventricle; and he suggested, as a probable explanation, "the altered quality of blood so affects the minute and capillary circulation as to render greater action (of the left ventricle) necessary to force the blood through the distant subdivisions of the vascular system." (*Guy's Hospital Reports*, vol. i.) About six years ago, it occurred to me that the hypertrophy of the left ventricle of the heart, in cases of contracted kidney, might be a result of increased contraction of the small arteries throughout the body, this contraction being excited by the abnormal quality of the blood; and I went on to argue that, if this were so, we should find evidence of the fact in the existence of hypertrophy of the muscular walls of the minute arteries in various tissues. And we have found this hypertrophy not only in the arteries of the kidney, but also in those of the skin, the intestines, the muscles, and the pia mater. It probably exists in the arteries of other tissues which we have not examined.

The probable explanation of the hypertrophied left ventricle in the advanced stage of contracted kidney, then, appears to be this. In consequence of degeneration of the kidney, the blood is morbidly changed. It contains urinary excreta, and it is deficient in some of its own normal constituents. It is, therefore, more or less unsuited to nourish the tissues, and probably more or less noxious to them. The minute arteries throughout the body resist the passage of this abnormal blood, and in consequence the left ventricle beats with increased force to carry

on the circulation. The result of this antagonism of forces is, that the muscular walls of the arteries, and those of the left ventricle of the heart, become simultaneously hypertrophied.

Now I wish to direct your attention to the fact that hypertrophy of the left ventricle, indicated by the apex beating below, and external to its normal position, with a strong heaving impulse, and the second sound accentuated over the aortic valves, without signs of valvular disease or senile degeneration of the arterial walls, but with a full, resisting radial pulse and high arterial tension, may be taken as evidence that the renal disease is not only chronic, but also in an advanced stage. These physical signs, therefore, will assist you in forming a prognosis.

Both the investing and the lining membrane of the heart are liable to become inflamed, as a result of blood-contamination during the progress of the renal degeneration. This complication will be indicated by the local, general, and physical signs of pericarditis or endocarditis, or, it may be, of both combined. Other serous membranes sometimes become inflamed—the pleura more frequently than the peritoneum. Œdema of the lungs and bronchitis are frequent complications. Pneumonia is comparatively rare, but it does sometimes occur.

Hæmorrhage.—In the advanced stages of the disease, hæmorrhage from different mucous surfaces is a common, and often a troublesome and alarming symptom. Epistaxis is the most common form of hæmorrhage; but I have seen it occur from the stomach and intestines, from the lungs, the bladder, and from the uterus in the form of menorrhagia. Amenorrhœa is, however, according to my experience, a more frequent result of advanced Bright's disease, than menorrhagia.

Cerebral Hæmorrhage.—The most serious, and by no means the least frequent form of hæmorrhage, is that which takes place within the cranium. In a large proportion, probably half, of the fatal cases of sanguineous apoplexy, the kidneys are found more or less diseased; and the granular degeneration which we are now discussing is the form of disease which is most frequently associated with cerebral hæmorrhage. The explanation of this common, and too often fatal accident, is not difficult. The minute cerebral arteries resist the passage of the abnormal blood, while the hypertrophied left ventricle is forcibly driving it onwards. Meanwhile the walls of some of the intermediate arteries undergo atheromatous degeneration—partly, perhaps, in consequence of the circulation of morbid blood, partly a result of the unusual strain and pressure to which they are subjected. At length, in the struggle between the propelling left ventricle and the resisting muscular arterioles, a brittle artery gives way, and a fatal hæmorrhage occurs.

Impairment of vision is one of the most serious results of granular contraction of the kidney. It occurs in two distinct

forms. 1. The impairment of vision may be so sudden in its onset, that in a few minutes or hours there is complete blindness, which usually passes away as suddenly as it came. The attacks of sudden and transient blindness may recur again and again. In these cases, ophthalmoscopic examination discovers no structural change within the eye. This form of amblyopia is believed to be of uræmic origin, and is designated uræmic amaurosis. It is usually associated with other symptoms of uræmia, and I shall presently have something more to say of its pathology. 2. In the second form of impaired vision, the dimness of sight comes on more slowly and is more durable. One eye alone may be affected, but both are often implicated simultaneously, or in quick succession. The ophthalmoscope reveals peculiar structural changes in the eye, the result of which is called *retinitis albuminurica*. You will find these appearances fully described and depicted in works on diseases of the eye, amongst which I may especially mention the elaborate and excellent treatise of my colleague, Soelberg Wells. Dr. Clifford Allbut, too, in his able and instructive book on the *Ophthalmoscope*, has an interesting chapter on the Retinitis associated with Albuminuria. The most characteristic ophthalmoscopic appearances are a broad, glistening white mound surrounding the optic disc, the result of sclerosis of the optic nerve fibres, and fatty degeneration of the connective tissue elements. The extreme margin of the white mound is broken up into small irregular patches, which assume, in the neighborhood of the yellow spot, a peculiar stellate arrangement. The retinal arteries are diminished both in size and number, while the veins are dilated and tortuous. Blood-extravasations, varying in number and in size, sometimes both numerous and large, occur here and there, chiefly in the internal layers of the retina, but sometimes in the external layers, or between the retina and the choroid. The coats of the blood-vessels are sometimes found in a state of sclerosis or fatty degeneration. The structural changes appear to be of an inflammatory and degenerative character. They are associated more commonly with the contracted kidney than with other forms of chronic Bright's disease. So characteristic are the appearances in the retina, and so insidious is the disease in the kidney, that an ophthalmoscopic examination for determining the cause of dimness of sight, has in many instances led to the discovery of an unsuspected renal disease. It may be well to mention here that the two forms of impaired vision which I have described, may occur together or in succession in the same subject. Uræmic amaurosis may in time be succeeded by albuminuric retinitis; and the dimness of vision which results from the latter may be temporarily much increased by uræmic amaurosis. The hemorrhage into the retina may be explained partly by the injecting force of the hypertro-

phied ventricle, partly by degeneration of the walls of the retinal vessels, and partly by venous engorgement consequent on pressure upon the veins by inflammatory exudation.

Cerebral Symptoms.—In the advanced stages of contracted kidney, various forms of nervous disorder occur with so great frequency, that the disease may be said to have a natural tendency to terminate with symptoms referable to the brain. These nervous symptoms are very variable. In some cases, epileptiform convulsions or profound coma may occur suddenly, without premonitory symptoms. Much more frequently these formidable symptoms are preceded for a variable period by other indications of brain-disturbance. Amongst the commonest of these are headache, more or less severe and constant; sudden, transient vertigo; equally sudden and transient loss of sight or bearing; temporary inability to speak, or the speech for a time is imperfect and stammering; numbness or neuralgic pains, cramps, chorea-like twitchings, or transient loss of power may occur in one arm or leg, or in both the arm and leg on one side; there may be confusion of thought, impairment of memory, and an indescribable nervous dread, with a feeling of utter prostration. After one or more of these symptoms have continued for a variable period, or recurred more or less frequently, the secretion of urine being usually scanty, and vomiting of frequent occurrence; the patient perhaps becomes drowsy, with more or less delirium; the tongue is brown and dry; the breath has a most characteristic sour and fœtid odor; the drowsiness gradually increases and deepens into coma; the pupils being natural or equally dilated, and the breathing more hurried than in ordinary cases of sanguineous apoplexy. And so death occurs either with or without convulsions. In some cases a single attack of violent convulsion is immediately fatal; in others, the convulsions recur again and again for several hours before the fatal termination. The brain after death is usually found extremely pale and anæmic, with some serous effusion beneath the arachnoid and into the ventricles. These are cases of so-called “serous apoplexy;” but the amount of serous effusion is insufficient to compress the brain, and so to explain the symptoms.

[To be continued.]

A NEW MODE OF TREATING PUERPERAL FEVER.

BY DR. CHARLES BELL.

It is not my intention to enter on a lengthened dissertation on puerperal fever, as it is fully described in many of our works on midwifery, and my object is merely to bring more prominently under the notice of the Society a mode of treatment which I

have been induced to recommend, from its successful results in diseases of a similar nature, as well as in the few cases of this disease in which I have had the opportunity of employing it. For, although I have been connected with the Royal Maternity Hospital for many years, only one case of puerperal fever has occurred during the period I was doing duty. I ascribe this immunity from the disease to the liberal use of the permanganate of potash, both as a lotion and in the form of a liniment, in making examination per vaginam, and to a strict attention to ventilation, and to the avoidance of over-crowding the wards. I feel satisfied that there is greater risk to the parturient woman from a close, contaminated atmosphere, than from the free admission of pure air into the lying-in chamber. I have, therefore, always ordered one of the windows of the wards to be kept partially open.

The more we study puerperal fever, the correctness of the opinion entertained by Sennertus and Riverius will appear the more obvious, namely: that it is a blood disease arising from the absorption of a virulent poison into the system, which is communicable from one individual to another, and may also be inhaled from the atmosphere. This circumstance was fully illustrated by M. Peu, in his description of the epidemic fever which appeared in the Hotel Dieu in 1664, when a great number of women died, in consequence of the number of wounded persons who were accommodated under the lying-in ward. This was the first appearance of the disease in the epidemic form, and it was peculiar in its character, as it was preceded by hemorrhage, and was attended by numerous internal abscesses. It formed a strong contrast to the next epidemic, which occurred in Paris in 1746, and proved fatal to many women, both in the hospital and to those who were delivered in their own houses. According to Monton, it "commenced with diarrhea; the uterus became dry, hard and painful; it was swollen and the lochia had not their ordinary course; the women experienced pain in the bowels, particularly in the situation of the broad ligaments; the abdomen was tense, and these symptoms were sometimes joined with pain in the head and cough. On the third or fourth day after delivery, the mammæ became flaccid. On opening the bodies, matter like curdled milk was found on the surface of the intestines; a milky serous fluid in the hypogastrium; a similar fluid was found in the thorax of certain women, and when the lungs were divided they discharged a milky putrid lymph. The stomach, intestines and uterus appear to have been inflamed."

It may not be uninteresting to refer to the character of the disease as it appeared in the epidemic which occurred in Paris and Lyons in 1750, as illustrating still further the complications which attend the disease, and prove still more its zymotic character. Poteau informs us that the uterus was found enlarged,

and its internal surface soft and black, and its parietes were livid and gangrenous.

While puerperal fever may be complicated in the manner just described, it is not a necessary consequence, as, like small-pox in its most fatal form, it runs its course so rapidly in some cases that there is no time to form any local lesion which can be ascertained during life or discovered after death. Dr. Rigby informs us that, in some of the cases which came under his notice in the general lying-in hospital, there was "neither time nor power to produce either symptom or trace of inflammation, the powers of life having from the commencement sunk under the deadly influence of the disease." He therefore adds "that, of all the diseases to which the lying-in woman is exposed, puerperal fever is the most to be dreaded, and that there is none in which the accoucheur is frequently more helpless."

In a disease of such virulence, it is of the utmost importance that a remedy should be discovered to moderate its severity. I am convinced of its similarity to erysipelas—a circumstance which has been proved, not only by its appearing epidemically along with that disease, as happened in Barnsley, in 1808, and in Leeds in 1809, but there are instances on record in which puerperal fever has been induced by those attending patients suffering from erysipelas, and then attending women in their confinement; and there have also been instances of puerperal fever patients producing erysipelas in their nurses. I have also observed both diseases existing at the same time in the same individual. I was therefore induced, many years ago, to suggest that the treatment which I had found so beneficial in erysipelas should be adopted in puerperal fever. I had no opportunity, however, of putting it in practice until a comparatively recent period, when I employed it in the only case which came under my care in the Maternity Hospital, and although the case was very severe, and the patient's life was despaired of, it proved successful, and the woman left the hospital in health. I have already reported this case so the Society. The success which attended this case led me to adopt it in another case, which I was requested to see by Professor Simpson, which was considered hopeless, yet the patient left the hospital in perfect health. Through the kindness of Dr. Young, I had an opportunity of employing the treatment in a patient of his, whom I attended in a premature labor. She was seized with puerperal fever soon after her confinement, and I despaired of her recovery, but she was ultimately restored to health, I understand, for I ceased my attendance before she was quite recovered.

I recommend small doses of calomel and James' powder in proportion of a twelfth of a grain each, along with a grain of white sugar, carefully mixed and given regularly every two hours until the bowels are freely moved; and thirty drops of

the muriated tincture of iron every three hours. The vagina to be washed out several times a day with Condyl's red fluid and tepid water, and a linseed poultice applied to the abdomen. If this treatment is regularly and fully carried out, and not in the *timid, partial* way which many practitioners do in erysipelas, and then undervalue the treatment, I feel certain that it will give the best chance of cure to the patients.

Dr. James Young believed that great benefit was obtained from using calomel in the manner described by Dr. Bell; he had lately suffered from an attack of erysipelas, and been treated with the tincture of the muriate of iron and calomel, in doses of a twelfth of a grain, with the best results. He had never seen head symptoms in puerperal fever, and he looked upon diarrhea as one of the most serious complications you could have in that disease.

Dr. Ritchie had tried calomel as a purgative, in the Children's Hospital, in doses of a twelfth of a grain, but without any effect. He considered it important to distinguish the special character of the fever; in a fever of the typhoid type, he would not be inclined to use the tincture of the muriate of iron.

Dr. Bell regarded puerperal fever as a disease *sui generis*, and that you may have complications occurring in it as in any other disease. The tincture of the muriate of iron, he believed, lowered both the pulse and temperature. The efficacy of the powder depends greatly on the manner in which it is compounded, and the regularity with which it is given. When these have been properly attended to, he has never found it to fail to move the bowels, and to diminish fever; but if they are neglected, it is not surprising that it should cause disappointment.—*American Journal Obstetrics*.

STRICTURE OF THE URETHRA.

Mr. Oliver Pemberton, in an address before the British Medical Association, speaking of stricture of the urethra, said: "It is to me remarkable, but it is true, that the views entertained by the highest surgical authorities of the day differ on no subject so widely as on the particular system they adopt and recommend in the treatment of stricture. Simple dilatation and rest, I am thankful to say, have had a great following, and, if I mistake not, will yet rise into higher position. The main quarrel is between the advocates of internal as opposed to external division. The late Prof. Syme (*Stricture of the Urethra*, p. 21, 1855) thought he had effectually put an end to the use of those "dreadful engines," as he termed M. Reybard's instruments; but he was mistaken, for strictures of this day are both cut, split, and torn; and new engines for the purpose multiply, as if the great surgeon

had never lived to speak of plunges in the dark with caustic, or of ripping open the urethra by internal section.

Stricture may fairly be defined to be a diminution of the normal diameter of any portion of the urethral canal; and, as it must be admitted that the existence of any stricture, however slight, from whatever cause proceeding, and of whatever nature, may sooner or later give rise to serious consequences, in the condition of either the bladder or kidneys, it is needful for the surgeon to discover and cure it as soon as possible. But the real question is in reference to this word cure. Have we to deal with a simple stricture that has resulted from inflammation of the lining membrane of the urethral canal, or with a stricture originally of this kind, which has been aggravated and increased in extent by ill-considered surgical proceedings?

For the first there is a cure by simple dilatation. For the second there is properly no cure. Once organic stricture, always organic stricture, is my belief. Whenever the lining membrane of the urethra has been injured, whether by accident, disease, or by bad surgery, the spot will contract and establish permanent stricture, and I do not believe that the materials constituting such cicatricial narrowing are ever absorbed.

If you endeavor to restore the normal calibre of the urethra, under these conditions, by ever so well-considered a system of dilatation, my opinion is that the contraction will return sooner or later with increased vigor, the natural elasticity of the canal being gone; in other words, dilatation will not effect a cure, and never does effect a cure.

But dilatation, if it be well and properly carried out, will protect the patient against the occurrence of those diseases which, dependent on individual health and mode of life, arise either rapidly or slowly in all cases of stricture. The degree to which it is necessary to carry this may fairly allow of discussion; for I have ever before my mind the conviction that the very means made use of to effect the so-called cure may become the certain cause of the continuance, and, in many cases, the increase of the malady.

I think it will be admitted that the tendency to narrowing in cases of stricture differs very markedly in individuals. Some may show few signs of change during many years; others, especially those arising from the effects of laceration by direct violence, certainly, surely, and often rapidly, increase. In all cases treatment by dilatation is necessary; but I doubt myself whether it is needful always to endeavor to restore the standard of the canal to the utmost of its original extent. I believe that there are many cases which admit of being maintained at a standard short of this, depending, however, on the facility with which the contraction yields, and its rate of increase subsequently. And it must never be forgotten that when once this treatment

by dilatation has been commenced—no matter how carefully or how thoroughly it may have been done—it will have to be continued, whether at the hands of the surgeon or of the patient, more or less during life.

For my own part, time being given, I do not believe that there is any stricture through which an instrument cannot be passed by a skillful surgeon. This being so, treatment by gradual dilatation follows; and, in my judgment, this should be by the silver catheter, as the safest, simplest, and most certain instrument, in the greatest number of hands, yet given to us. If the induration be cartilaginous and non-dilatable, or if there be fistula, the treatment by external division on a grooved staff should be adopted as speedily as possible.

Entertaining this view of the permanence of the changes established in the urethra by injury or disease, I am not very likely to favor any internal severance of the lining of the canal, whether by Mr. Holt's method of so-called "splitting," or by any form of internal cutting. I believe a wound is produced just as much in the one case as the other. I regard those methods as artificially inducing the very conditions which I lament should result from almost unavoidable causes; and I further believe that a shut-up wound on the internal face of the lining of the urethra is attended by dangers from which an open wound on the outside face is comparatively free. I have had occasion to divide the urethra after Professor Syme's method in upwards of thirty cases. In one case only was there a fatal ending, and this from pyæmia. In no case was there a relapse, provided that an instrument was passed from time to time; the frequency of this being determined by individual tendency to re-contraction, once a month to once in three months being about the average; and by this means the calibre of the urethra was without difficulty maintained at its original standard. All cases that I have seen, save one, have required this continued resort to dilatation, and will require it, in my judgment, more or less during life; for there is no more a cure by this than by dilatation or splitting. In the case that did not require it a fistula remained permanently in the perinæum, letting through a little urine, the general stream flowing by the urethra, which at the end of twelve years shows no disposition to contract.

If the induration of the urethra, and narrowing, be of such an extent as to preclude the idea of dealing with it by external division, I prefer to tap the bladder by the rectum. I do not feel inclined at present to divide from the the bulb to the meatus; and this literally must be the length of an incision in many of these long-standing cases, if the entire disease is to be dealt with.

There are numbers of these inveterate cases wholly unsuited to external division; but they are eminently calculated to be

dealt with by a method which diverts the course of the urine to another channel, in order that rest may heal the fistula, and absorb much of that adventitious material blocking up the natural urethra, which can then readily be found, and have a standard established almost without resort to dilatation.

I frankly say that I do not believe that either internal or external division of any urethra will cause the healing of fistula in the groin, buttock, and perinæum, where a man passes his urine, as it has been graphically described, like a watering pot.

Surely, relief by the rectum will stand comparison with all the manœuvres that have been suggested from the days of Hunter to Grainger, and from Grainger to Wheelhouse. I cannot conceive why a patient is to sustain—sometimes for hours together—the distress belonging to hopeless attempts made to trace in that stage of the disease, an impracticable canal, when the chief cause of the malady—the flow of urine—can be reached and diverted in a moment.

I am able confidently to state that it is wholly free from danger. Indeed, I can scarcely conceive death following as a direct result of the operation. So little fear of the proceeding had one of my patients that he has been tapped at least six times for the relief of fleeting attacks of retention, dependent on a rapidly distended bladder, unable to empty itself in the presence of a long-standing, organic stricture. I have seen him almost within a day or two afterwards, as if nothing had occurred. Further, no fistula remains, for the opening in the rectum invariably closes after a few weeks.

I have left in the silver canula for three weeks, and have not found any inconvenience from its presence; indeed, it appears to me that one of the greatest arguments in favor of its adoption exists in the fact of the position of the canula, which, while certainly securing the emptying of the bladder, is wholly removed from the urethra. I am strongly myself of opinion that many urinary cases terminate fatally from urethral irritation, set going and kept up by an instrument retained in the canal in its length.

Some persons are very tolerant of tied-in catheters, while others, dependent on a certain idiosyncrasy, cannot sustain with impunity the simple introduction of an instrument. I saw a case in a young man, which all but ended fatally from epileptic convulsions, induced by a first catheterism; while the single introduction of a lithotrite, in a man of 77, to measure a large, smooth stone, that had been carried with impunity for years, set up such an attack of cystitis that death ensued. You may leave an instrument in the bladder for years from the perinæum, but you cannot do this with impunity and traverse the length of the urethra. Morbid sympathies become excited in connection with the urethra, which are not produced by the introduction of instruments into other mucous channels.

In what I have said, I have urged the adoption of tapping by the rectum, as affording assured relief to the most inveterate forms of stricture. And, in considering the treatment of this disease, I have hitherto limited my observations to cases of stricture of the urethra, *per se*, not to those complicated by retention of urine. I must equally urge it, however, as the remedy most reasonable for almost every form of retention. It is the absolute cure of spasmodic stricture; and if, in any case arising from this cause, after one good effort has been made to obtain relief by ordinary means, there is no success, it should be carried into effect. If retention be present with an impermeable urethra from an organic stricture, a double necessity supports its selection, while I have yet to learn that it is inadmissible in the retention of old people from enlarged prostate. I know that it can be accomplished in these cases, but of course not so readily as if the rectum had only its ordinary contents; and I am quite satisfied that far less irritation would be produced in the majority of these cases, where death so often directly results from the effects of instrumental measures, by the presence, at the most depending part of the bladder, of a harmless tube, calculated to secure the removal of all urine secreted, and thus master that inevitable decomposition which is not overcome by any other method in use, for the simple reason that one and all fail to empty the bladder. If the membranous urethra bulge behind a stricture, or if an abscess opened in the perinæum suggest a ready path to the bladder, by all means let a female catheter effect, through the perinæum, what otherwise, I maintain, can be accomplished by the rectum.—*The Doctor.*

MEDICAL GLEANINGS.

PANDEMIC WAVE—CATTLE PLAGUE—CEREBRO-SPINAL MENINGITIS.—The pestilential wave which swept over the Atlantic face of the continent, during the past year, limiting its most potent influence to horses, has evidently crossed the Rocky Mountains, and invaded the Pacific slope, though with modified force. In Utah and Nevada, its character was well marked. Various statements have been published of disease and mortality among horses in California, but nothing like an epidemic has occurred. A pestilential influence, however, has pervaded our territory, attacking the human race, and terminating, with some abruptness, the long and remarkable period of healthfulness consequent on the variolous epidemic of three years ago. Measles, hooping-cough, erysipelas, mumps, have illustrated this epidemic diathesis. Quite recently comes a newspaper announcement of a fatal disease breaking forth suddenly in several localities in the north-

ern section of the state. The subjects, it is said, are principally children, and they are seized with spasms, their heads being drawn backwards; and they sometimes die in a few hours. In this brief, popular description, one cannot fail to recognize the malignant disorder which has so much attracted the attention of medical writers in Europe and America, in the last twenty or thirty years, as cerebro-spinal meningitis, cerebro-spinal arachnitis, typhoid meningitis, malignant meningitis, spotted fever, petechial fever, malignant purpuric fever, febris nigra, etc. The character and fatality of this disease as it has pervaded many sections of the Atlantic and Mississippi states, in an epidemic form, renders it a very unwelcome visitor; and as the probabilities are that we shall have a taste of it on the Pacific slope, it might be well for medical men to acquaint themselves thoroughly with its nature, and to prepare for it.

In this connection we may add that any of the modern textbooks on practice give tolerably full accounts of the disease. Perhaps the best one is that of Dr. Clymer, contained in the last edition of Aitken, and very recently re-published by the author, with additions, in a monograph of 50 pages. Dr. Clymer traces the causation of the disease, in New York city, to filth and crowding, aided by climatic influences. However this may be, no such local agencies will account for its development in the mountain-towns of California, nor in the many rural localities which have been the theatres of its ravages east of the Rocky Mountains.—*Pacific Med. and Surg. Journal*.

ERGOT IN HEADACHE.—Dr. Silver, of Ohio, in the *Philadelphia Medical and Surgical Reporter*, recommends ergot in headaches, especially the nervous or sick headache. He says it will cure a larger proportion of cases than any other remedy. His theory of its action is that it lessens the quantity of blood in the brain by contracting the muscular fibres of the arterial walls. He gives ten to twenty drops Squibbs' fluid extract, repeated every half hour till relief is obtained, or four or five doses used. In other forms of disease, where opium alone is contra-indicated, its bad effects are moderated, he says, by combining it with ergot.—*Pacific Medical and Surgical Journal*.

ROYAL OPHTHALMIC HOSPITAL OF LONDON.—The Royal Ophthalmic Hospital, Moorfields, is one of the wonders of London, the out-patients' waiting room resembling a church with a packed congregation, so numerous are the applicants. The patients are seen every day in the week, there being a large medical staff of officers. Each day is represented by three out of their number, who also operate on their respective days. Among the celebrities are noticed Mr. Bowman, Mr. Critchett, Mr. Sæberg Wells, Mr. George Lawson, whose manual on diseases and injuries of the eye is in every studio. Jonathan Hutchinson, Mr. Cooper,

and others are connected with this establishment. Mr. Critchett performs all his operations under the influence of chloroform. Mr. Bowman seems to prefer the bichloride of methylene. Having administered the latter, and seen it also frequently given, I intend making here a few remarks about its employment. From what I have seen and learned from the house surgeon, Mr. Morgan, it seems better fitted for operations of short duration. On its being first administered to the patient, a sense of suffocation, compared to fainting, is felt, giving rise to struggling on the part of the patient, after which he falls into the same state as characteristic of chloroform. It has this advantage, that the patient is very soon placed under its influence and is easily resuscitated, which is an important item at Moorfields, where there are so many operations.—*Canada Med. and Surg. Journal.*

NUTRITIVE ENEMATA.—It has been maintained by the physiologists, Steinhauser and Beclard (*Gazette Hebdomadaire*, Aug. 23d, 1872) that the capability of digestion of the large intestine, which in its normal state is exceedingly small, may become more active when the juices of the small intestine, not being employed in the process of digestion, flow into the cæcum. M. Leube suggests that this discovery should be utilized for the benefit of invalids, and he therefore alleges the possibility of supporting life by throwing into the large intestine certain digestible substances mixed with a digesting agent. The latter consists of the pancreas of swine.

The enema which he suggests is a hash consisting of 50 to 100 grammes of the pancreas of a cow, freed from all fat, and 150 to 300 grammes of beef. These two substances are pounded up in a mortar, and suspended in a sufficient quantity of warm water. The injection of this compound, it is asserted, is never followed by diarrhea. On the contrary, it is generally retained in the intestine for a period varying from twelve to thirty-six hours. For the digestion of albuminous substances it is thought that pepsine might be more efficacious.—*Boston Medical and Surgical Journal.*

SICK-HEADACHE—GUARANA—A NEW REMEDY.—A species of Paullinia, under the name of Guarana, has been employed for several years on the European continent as a remedy for sick headache and some other disorders. Considerable attention is directed to this new remedy, and a number of distinguished British writers regard it as a valuable addition to the *Materia Medica*. Dr. Wilkes, writing in the *British Med. Journal* for Dec. 21, declares that there can be no doubt of its power frequently to arrest a sick headache. He classes it with bromide of potassium and cannabis in the treatment of that distressing malady. He has known a gentleman to come home with a

"splitting headache," and, taking twenty grains of bromide, go off presently to sleep in his easy chair and wake up in an hour well. He depends on the cannabis in the interval, giving a "few drops" of the tincture three times daily, by which a permanent cure is often effected.

RUPTURE OF JEJUNUM FROM A FALL.—The *London Lancet* for Dec. describes the case of a man who fell fifteen feet, striking on his side. He walked about for some time, exhibiting no signs of serious injury. In five or six hours he complained of pain in the chest and abdomen, but this did not last long. He vomited once and had some nausea. But still later he had no pain, nor sickness, nor collapse. In about twelve hours after the injury severer symptoms ensued and he died next morning. The jejunum was found ruptured near the duodenum.

FATTY LIVER DURING LACTATION.—In a communication to the French Academy (*Gazette Hebdomadaire*, Jan. 3rd,) M. Sinety states the results of numerous experiments and observations on women, and on inferior animals, as follows: 1. There is a fatty condition of the liver, independent of gestation, which is developed at the same time as the process of lactation, and continues and terminates with that process. 2. The situation of the fat in the lobules of the liver, in females during lactation, is totally different from what we find in other fatty conditions of that organ, such as infiltration, degeneration, etc.

ON A MEANS OF INTENSIFYING CARDIAC MURMURS.—At a meeting of the Clinical Society of London, held on December 13, Dr. Vivian Poore explained a simple means of intensifying cardiac murmurs, which is likely to prove useful at the schools as an aid to clinical teaching. He illustrated the scheme by making his patient lie down upon a common mahogany table, placing a walking stick vertically on the center of his chest about the level of the third costal cartilage, and balancing upon the top of the stick the sounding-board of a guitar with the orifice downwards. His patient was the subject of an aortic diastolic bruit, and the arrangements made caused the murmurs to be distinctly audible to the members standing around at a distance of several feet from the patient.—*Medical News and Library*.

IN-GROWING TOE NAIL.—This *bete noir* of minor surgery is still engaging the attention of members of the Medical Profession in different parts of the world. A writer in the *Boston Med. and Surg. Journal for February*, proposes a new operation for its relief. It consists in removing with the knife by a single stroke all the diseased parts, together with quite a large piece of the sound flesh, skin deep, from the side of the toe, sometimes making an open wound one inch long by half an inch wide. No portion of the nail need be removed; but if in order to

fully secure all the diseased flesh, overlapping or undergrowing, a segment of the nail is removed, no harm can come. The wound is allowed to heal by granulation, and, as contraction of the cicatrix takes place, there is a drawing in of the skin from all sides, including of course that near the nail. The shape of the toe is also improved by the operation.

SALICIN IN OBSTINATE DIARRHEA.—Dr. Mattison, of Chester N. J. (*Phil. Med. Reporter*, Feb. 1) has treated the most obstinate diarrhea with great success by giving salicin in small doses frequently repeated—say two or three grains every four hours to an adult.

TO PREVENT SCARS IN SMALL-POX.—Among the many applications for this purpose is an ointment composed of 5 parts of soap, 2 of glycerine and 10 of mercurial ointment. It is reputed to have the power of checking the suppuration and protecting the skin from injury.

NATURAL CURE OF DISEASE.—Professor Armor (*New York Medical Journal*), in a lecture on the above subject, says:—there are mainly two errors which the young physician should carefully avoid. The first is in doing too little, the second is in doing too much—the frequent resort to heroic, violent, depressing and uncertain drugs. It cannot be too often repeated, that powerfully-acting drugs, unintelligently administered, are dangerous. The strong and successful practitioner is usually a man of few remedies.

He lays down the following rules: 1st.—Never administer a powerful drug without a definite purpose; that is, without a clear indication; for drugs never occupy neutral ground.

2nd.—Never use more medicine than is requisite to produce the effect which is intended, and continue it no longer than is absolutely necessary. It is a wise and true saying, that “it often happens to a good physician to find no indications for treatment; to bad ones, never.” He also strongly recommends *placebos*, of a palatable form, when the indications for active medicine are not well marked, and whether administering drugs or not, see that the patient is put on the best possible *hygiene*.

TREATMENT OF PUERPERAL FEVER.—Dr. Charles Bell of the Royal Maternity Hospital (*Am. Journal of Obstetrics*), believes that puerperal fever is very similar to erysipelas. He therefore suggests similar treatment. He gives small doses of calomel and James’ powder every two hours, until the bowels are freely moved, and thirty drops of Tinc. Ferri. Mur. every three hours. The vagina is to be washed out several times a day with Condyl’s fluid and tepid water, and a linseed poultice applied to the abdomen. This treatment, if regularly and fully carried out, and not in the timid, partial way which many do in erysipelas

and then undervalue the treatment, will give the best chance of cure to the patients.

ESCAPE OF LUMBRICI FROM ABSCESSES, ETC.—Two remarkable cases of this kind are mentioned in the *London Lancet*, November 9th and 30th, 1872. One case occurred in the Mansfield Workhouse Infirmary. A boy, aged 13, was suffering from disease of the hip joint; abscesses kept forming and bursting about the joint, from one of which was discharged a large lumbricus about 18 inches long and coiled upon itself. The wound healed rapidly afterwards, and the lad's health improved very much. Another case occurred in a child 10 years of age, suffering from phlegmon of the spermatic cord on the right side. Poultices were applied, and in a few days the abscess was lanced. Two days after a large worm was found on the poultice. Santonine was then administered, and was followed by the expulsion of eleven lumbrici through the scrotum, and several by the bowels. The child got better. It was subsequently ascertained that an inguinal hernia existed on the right side, from which it was inferred that inflammation and sloughing had taken place, and in this way the worms escaped. It is not so easy to understand how the lumbricus found its way into the abscess at the hip.

IODINE AS A DISINFECTANT.—Iodine may be used to disinfect the air in hospital wards, sick chambers, etc., in the following simple manner first suggested by Dr. B. W. Richardson. Solid iodine is exposed in glass or porcelain vessels in different parts of the room. The vapor of iodine is given off at ordinary temperatures. It has been found a very efficient mode of obtaining a constant disinfection.

EXCISION OF KNEE JOINT.—Dr. Holmes, of St. George's Hospital, England, says that the mortality after excision of the knee joint is about double that after amputation above the knee, and that the period of convalescence is about four times as long after excision. The operation he considers justifiable only in a small number of cases, under the most favorable circumstances.

SALIVATION FROM ETHER.—Dr. Hutton (*Phil. Med. Reporter*) etherized a young man for the purpose of removing a splinter of iron. A few days afterwards he found his patient suffering from profuse salivation.

ASPIRATION IN HERNIA.—Attention has lately been attracted to a method of treating strangulated hernia by puncturing the sac with a fine needle and evacuating by means of an instrument termed an *aspirateur*, a portion of the contents, after which reduction is easily accomplished. There is no escape of air or liquid into the abdomen, and the puncture of the intestine is found to close immediately. The same treatment is frequently resorted to by many practitioners in abdominal tympanitis, and

also from distension of the bladder from urine when the catheter cannot be passed.

CORRESPONDENCE.

POTOMAC, OHIO CO., W. VA., March 6, 1873.

PROF. J. A. THACKER, M. D.

DEAR SIR:—Enclosed, I send you one dollar and a half for *MEDICAL NEWS* for present year.

The statements of Dr. Beck, of Fort Wayne, Ind., are very extraordinary. When I was a very little boy, I was told that there was once a woman who had swallowed a snake to the great annoyance of herself and physician. It would thrust its head into the patient's throat and devour her food; but when the doctor would attempt to catch it, it would draw back. Finally he hit on a stratagem by which he out-generated it. He caused the patient to eat heartily of salt fish, and withheld all drink until thirst became very intense, and the snake very restless. He then caused water to be poured in a continuous stream from a height before her, and when the half famished snake protruded its head a little more than usual in its anxiety for water, the doctor grappled it with hooks and drew it forth.

Might not Dr. Beck's case be a similar one? Might not a snake, or perhaps a snapping-turtle, have entered Mrs. H. L., at some time, and it have been its head lying in wait for some more unwary intruder, instead of the mouth of the uterus, that he saw?

Very respectfully,

J. H. Cox.

Book Notices.

WOHLER'S OUTLINES OF ORGANIC CHEMISTRY. By RUDOLPH FITTIG. Ph. D., Nat. Sc. D., Prof. in the University of Tubingen. Translated from the eighth German edition, with additions by IRA REMSEN, M. D., Ph. D. Prof. in Williams College. 12mo. Pp. 530. 1873. Philadelphia: Henry C. Lea. Cincinnati: R. Clarke & Co.

This work has met with great success in Germany, having passed through eight editions in that country.

It is designed both for the use of the beginner and for those advanced in the science. The beginner will find a simple principle of classification, carefully carried out, eminently fitted to his first object of obtaining a general view of the subject; the advanced will find it exceedingly rich in statements of facts with which he has constantly to deal.

All of our works on chemistry contain a few pages upon organic chemistry in the back of them; but the treatment is so exceedingly meagre that it is quite worthless. The work of Wohler is devoted

entirely to organic chemistry, and forms a complete scientific treatise. This interesting branch of science is commanding more and more attention every day, and we have no doubt its many cultivators in this country will take much pleasure in an American edition of a work held in so high esteem in Germany.

A MANUAL OF CHEMICAL ANALYSIS AS APPLIED TO THE EXAMINATION OF MEDICINAL CHEMICALS—A guide for the determination of their identity and quality, and for the detection of impurities and adulterations. For the use of Pharmacutists, Physicians, Druggists, and Manufacturing Chemists, and for Pharmaceutical and Medical students. By FREDERICK HOFFMAN, Ph. D., Pharmaceutist in New York. 1873. 8vo. Pp. 393. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co.

The quite lengthy title-page of this work gives a pretty full description of its plan and purpose. As the author very properly states, it is the duty of the pharmacist and the dispensing practitioner of medicine, as also of the druggist and manufacturing chemist, to examine the medicinal chemicals of commerce as to their identity, quality, and purity. In this volume it has been the endeavor to supply the knowledge necessary, in a manner and to the extent as to confine the work within the precise limits of requirement, without detracting from its general scope and its practical usefulness.

We open the volume at random, and, under the heading of *Acidum Aceticum*, we find a description of acetic acid, chemical and physical; an account of its two official strengths; the readiest mode of ascertaining its strength. Then follows a list of its adulterations, with an account of the modes of detecting them.

We have no doubt the work will be found highly useful to those for whom it is designed. It has been compiled with special reference to the fifth decennial edition of the U. S. P. and to the latest British Pharmacopeia. We have an epitome of what is widely scattered through chemical, pharmaceutical, and medical manuals and journals.

Editorial.

AMERICAN MEDICAL ASSOCIATION.—The twenty-fourth annual session of this body will be held in St. Louis, Mo., on May 6, 1873. Dr. T. M. Logan, of Sacramento, Cal., is the President-elect.

Physicians desiring to present papers before the Association should observe the following rule:

"Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary to whom such papers are sent, to examine them with care, and, with the advice of the Chairman of his Section, to determine the time and order of their presentation, and give due notice of the same. . . ."

The following is a list of the Secretaries of Sections:

Chemistry and Materia Medica,—Ephraim Cutter, Boston, Mass.

Practice of Medicine and Obstetrics,—Benjamin F. Dawson, New York, N. Y.

Surgery and Anatomy,—W. F. Peck, Davenport, Iowa.

Meteorology and Epidemics,—Elisha Harris, New York, N. Y.

Psychology,—John Curwen, Harrisburg, Pa.

Medical Jurisprudence, Hygiene, and Physiology.—A. B. Arnold, Baltimore, Md.

It is proposed so to amend the By-laws that, instead of a report on Medical Education, on Medical Literature, and on Climatology and Epidemic Diseases, there shall be annually delivered before the Association, at its general meetings, an address in Medicine, an address in Surgery, and an address in Midwifery, or the Diseases of Children, the lecturers to be appointed this year by the President, afterwards by the Committee on Nominations.

Secretaries of all medical organizations are requested to forward lists of their delegates, as soon as elected, to the Permanent Secretary W. B. Atkinson, 1400 Pine Street, Philadelphia.

BOGUS DIPLOMA BUSINESS.—Some time ago the legislature of Pennsylvania repealed the charters of the Eclectic College and American University of Pennsylvania, for issuing diplomas to individuals who had never studied medicine. But notwithstanding this action, it seems that bogus degrees are still a matter of merchandise emanating from Philadelphia. To crush out the iniquitous proceeding, if possible, the legislature recently passed a resolution instructing the Attorney-General to look into the matter and ascertain to what extent it is going on.

We think the legislature of the state of Ohio would do a commendable act if it would order an investigation of the conduct of the Medical College of Ohio in conferring degrees upon persons not entitled to them. We disclosed, in our last number, how a common nostrum vender, who never studied medicine a day, had had conferred upon him the degree of M. D., and how others had been graduated who had never fulfilled the ordinary requirements of graduation. Unless a stop is put to such proceedings, the profession will become degraded, and it will soon be that the degree of M. D. will become a stench in the nostrils of every respectable person. There is no college in the country whose affairs need investigation more than this same Medical College of Ohio.

CINCINNATI COLLEGE OF PHARMACY.—This institution held its first Commencement Exercise, Wednesday evening, March 12, in its lecture room, No. 259 Walnut street.

The Germania Band opened the exercises with excellent music, and it filled the intervals of the speeches very acceptably to the audience.

Professor J. F. Judge, premising that progress in all the departments of nature, and in the departments of human activity, was from complex and ill defined conditions to definite functionalized conditions, explained how, from the comprehensive occupations of the physician of half a century ago, had grown several well defined professions, that of pharmacy among them. Proceeding thence, he gave the following history of the Cincinnati College of Pharmacy:

In 1849 the pharmacists of Cincinnati organized the Cincinnati Pharmaceutical Association. On the 23d of March, 1850, the Legislature of the State of Ohio granted a charter to the association, with the style of the Cincinnati College of Pharmacy. Prof. Judge read the charter. An effort was then made to secure instruction in Pharmacy. John Locke, John A. Walter, and E. S. Wayne began a course of lectures, but for some reason or other they were not a success, and for a time the project of keeping up a course of lectures and a school was abandoned, though the association kept up its regular meetings. Then in 1860 the war broke out and the meetings of the association were discontinued.

In October, 1871, it was determined to make an effort to reorganize the college. On the 20th a faculty was organized. On the 4th of De-

cember a course of lectures was begun, with E. S. Wayne professor of materia medica; — Rentz, of botany, and J. F. Judge of chemistry. In the succeeding summer the faculty was re-organized as follows: E. S. Wayne, materia medica and botany; W. P. Chapman, pharmacy; J. F. Judge, chemistry. This faculty conducted a course of lectures last winter.

A class numbering 51 has passed through the regular course of study; of these, 10, having successfully passed a rigid examination before the faculty and a delegation from the Board of Trustees of the college, are to receive the degree of graduation in Pharmacy.

THE GRADUATES.

Prof. Judge then presented diplomas to the following graduates: William E. Kiely, Andrew W. Bain. Jos. H. Feemster, Augustus G. Luken, Chas. P. Rendigs, Henry Wagner. Chas. E. Ferris, John E. Martin, Gustav Weisbrodt, George D. Pinger.

STILL CHARTERED.—*The Evening Telegraph* of March 10, contained the following item:

"Recently Judge Agnew, in the Supreme Court, gave the following decision in a case brought against the Eclectic College:

"The charter of the Eclectic Medical College of Pennsylvania was granted by Act of Assembly in 1850, before the amendment of the Constitution in 1857. It contains no power of repeal. That such a charter is a contract between the State and the corporators, as to the franchises granted, is well settled. *Iron City Bank vs. City of Pittsburg*, 1 Wright, 340. Without a judicial proceeding to declare a forfeiture of the charter upon cause shown, there is no power to repeal it summarily: *Erie and North East Railroad Company vs. Casey*, 2 Casey, 301: same *vs. same*, 1 Grant, 271; *Com. vs. Pittsburg and Connellsville Railroad Company*, 8 P. F. Smith, 46-7. The act of 22d March, 1872, is the act of but one party to the contract, without a power reserved in the contract to authorize the State to do the act, and, being without the consent of the other party (the corporators), is nugatory, because of the Constitution of the United States, article 1, section 10, and the Constitution of the State, article 9, section 10, forbidding the passage of laws impairing the obligation of contracts. The recital in the preamble of the act of 1872, that it had been ascertained, by evidence produced before a committee of the Senate, that the Eclectic Medical College had been guilty of unlawful, discreditable and dangerous acts, on which the repeal was thereupon declared, does not help the case. The committee had no judicial power, and could not turn itself into a court of justice to take jurisdiction, summons and try the corporation for its alleged offences. It was but a portion of the legislative body itself, charged with a function merely auxiliary to legislation. Its judgment was no more than the judgment of the body conferring upon it the power of inquiry. The act of 1872, repealing the charter, was therefore without legislative force, and void. The corporation is entitled to a trial in due course of law, to ascertain its breach of duty, before its charter can be taken away. A franchise is a valuable privilege, and is property in the contemplation of law; and the body possessing it is as much entitled to a judicial determination of its right, or want of right, to hold it, as a natural person is of his right to his lands or his goods. The defendant is therefore entitled to judgment upon his demurrer.

"Demurrer sustained, and judgment thereupon for the defendant, that he go without day, and be paid his costs."

The lectures in the schools of medicine and pharmacy at Montpellier in France, suspended recently by government on account of certain irregularities on the part of some of the students, were resumed on

the 14th of February; only those pupils being admitted, however, who were provided with tickets by the authorities. No clear statement of the exact cause of the trouble has as yet been made public.

CURIOUS SUIT.—The *Phil. Med. Times* states that a case was recently tried in that city in which damages were claimed from a physician for the death from small-pox of a child whom he had failed to vaccinate. The plaintiff alleged that in November, 1871, when the small-pox was first pronounced to be epidemic in Philadelphia, the doctor was casually asked to vaccinate his child, an infant not quite a year old; the doctor performed the operation, and was paid his fee. The vaccination did not succeed, and the doctor was again called upon in regard to it, but said he had not then any good virus. However, he did not perform the operation again, having been out when the child was brought to him for the purpose; and in March following, the child was attacked with the disease and died. Plaintiff claimed that the doctor expressly took charge of the case; and neglected it—first, in not vaccinating properly when he undertook the operation in November, and afterward in not vaccinating at all when he was required and promised to do so, from which alleged negligence the death of the child resulted; and for this it was sought to hold him responsible in damages. Judgment of non-suit was entered against the plaintiff.

THE POPULAR SCIENCE MONTHLY.—(Published by D. Appleton & Co. New York Price \$5 a year, single numbers 50 cts.) The number for April is the concluding number of the first annual volume of this magazine, which is of the highest order of any magazine published in this country for general reading. It is a well conducted organ of views of such men as Herbert Spencer, Dr. Draper, and Profs. Brewer, Henry and Le Conte. Exclusive of editorial matter and miscellany, the present issue contains the following articles: On the importance of the Cultivation of Science, by Prof. Joseph Henry; the Nebular Hypothesis, by Prof. John Le Conte; River and Lake Terraces (illustrated); Applied Sanitary Science, by Dr. J. R. Black; Barbarism in English Education, by Hon. E. E. White; The Horned Frog, by Frank Buckland (Illustrated); On the Transfusion of Blood, by Gustav Lemattre; Science and our Educational System, by President F. A. P. Barnard; The Troglodytes, or Cave Dwellers of France, by Paul Broca (illustrated); The study of Sociology, by Herbert Spencer; English and American Science, by Prof. John W. Draper; Science and Public Affairs, by President Andrew E. White; Discovery of Mount Tyndall, by Prof. Wm. H. Brewer.

HALF-YEARLIES.—By oversight last month we neglected to call attention to the class of medical periodicals mentioned which we have received.

Braithwaite's Retrospect, published by W. A. Townsend, 174 Broadway, New York. Part LXVI. January, 1873, has been received. It is in no way inferior to its predecessors. Price \$2.50 a year.

Half-Yearly Abstract. Part LVI. is at hand. Price \$2.50 a year alone; but the *Abstract*, *American Journal of Medical Sciences* (quarterly), and *American News and Library* (weekly), all for \$6—the largest amount of medical reading matter for the money in the world. Published by H. C. Lea, Philadelphia.

Medical Compendium. Part XI., January, 1873, is received. No better half-yearly than this is published anywhere. One half or more of the selections are from American journals. Published at \$3 a year by Dr. S. W. Butler, Philadelphia.

THE CINCINNATI MEDICAL NEWS.

VOL. II.

CINCINNATI, MAY, 1873.

No. 5.

A REVIEW OF MR. GIMBERT'S MEMOIR ON EUCALYPTUS GLOBULUS.

By THOMAS C. MINOR, M. D., Cincinnati, Ohio.

Of late years the medical world has been startled ever and anon by the announcement of some grand discovery, the which was to redound to the benefit of poor, suffering humanity. If we take into consideration the fact, that a large number of scientific investigators are constantly engaged in chemical and physiological experimentation, this will not appear strange. The tendency of the age is to exaggerate, and no sooner is a medicine introduced than every one of an army of practitioners discover some new efficacy in the drug. In the course of a few months the journals are flooded with articles, and, if we are credulous enough to believe all we read, we might as well discard the whole pharmacopœia, and cling with fond hope to our new-found panacea. Time works many changes; a year goes by, and the pet remedy once so frequently prescribed is now neglected. The poor apothecary, gazing dolefully on "that expensive dead stock," thanks heaven that new medicines are not discovered every day.

The modern doctor follows the medical fashions, so to speak. No girl of the period is more fastidious regarding the style of her new spring bonnet than he regarding the new-style remedy. He tries it on in every case; here in a case of typhoid fever; there in a case of pneumonia; again, in a case of measles. Happy result! his patients all three recover! Inspired by an irresistible desire to benefit his fellow man, he madly rushes into print (he neglects in his article to state whether *nature* had a

hand or not in the curing of his patients), extolling to the skies the wonderful medicine,—his “patients all (extraordinary to state) recovered!” Some “youth to fortune and to fame unknown,” residing in a backwoods county, sends an order to the city for the new “cure all;” he also is filled with scientific ardor, but is deluded by the idea that he knows less than a city man; he gives the medicine all around; some fine day, a week afterwards, he receives the congratulations of the village sexton on his rapidly increasing practice,—“keep on, boy,” says the venerable grave-digger, “I reckon as how you’ll run the old Doc. out yet, jedgin from the large number of patients yer hev—(*solto voce finale*) buried.”

From a business point of view, the introduction of a new medicine presents startling features in its sudden fluctuations of demand, supply, and prices. Take for instance two remedies which in their turn attracted great attention, one of which proved to be a real boon, the other an outrageous humbug. I allude to chloral-hydrate and the far-famed cundurango. At the time these drugs were first introduced into this market, I was connected, in a business way, with a wholesale drug house in this city. A German firm (Gehe of Dresden) sent a large quantity of chloral-hydrate to New York; a portion of this was shipped out to us. For fully two months not a single ounce was sold; there was no demand for it, although it was quoted at only 75 cents per ounce. Suddenly, and without any previous warning, the article jumped up to \$2.50 per ounce in New York; almost simultaneously the demand commenced here. In five days’ time our stock was completely exhausted, and we were unable to supply any further demand. Almost every drug house, of any prominence, in this city, was wiring “east” for a supply. Two weeks afterwards two steamers arrived in New York, each having quite a cargo of chloral-hydrate aboard (Schering, of Berlin, the most celebrated manufacturer of the article, had, it was said, stocked the market). Chloral-hydrate dropped from \$16.00 to \$11.50 per pound in two days; a month after this again \$5.20 per pound would buy it—not Schering’s, but a fair brand however. From a demand for ounces came a demand for tuns of this new medicine; about that time a person glancing over medical periodicals, might have occasionally seen the report of a death from the effects of the new drug. Chloral-hydrate has come into common use, and is

now extensively manufactured in various parts of the country, while its various therapeutic applications are pretty generally understood.

Cundurango was never a success from the beginning. It was first retailed at about \$10 per ounce, or at the rate of \$160 per pound. It was too well advertised; so many distinguished statesmen and eminent divines certified to its efficacy, physicians became suspicious that it was not all right; in fact, it was looked on as a patent-medicine arrangement in the hands of Keen, Bliss & Co. The price fell rapidly after its introduction, for a great many bales of cundurango were shipped to New York from South America before K. & B. had fairly embarked in the business. So much for the introduction of new medicines viewed entirely from a business point. Every druggist can certify to the fact of what I have stated, *i. e.*, that there is always a *fashionable drug* in the market, one which requires them to meet the demand with an adequate supply, and to stand the risk of an after loss.

The reader may be lead to believe, from the previous remarks, that the writer is old foggyish, and opposed to the introduction of new remedies; such, however, is not the case. The objection may be raised that it is impossible to discover the physiological (*i. e.*, toxical) effects of a drug unless we give it to patients by way of experiment; which is true; but the point I wish to make is this: *all practitioners* are not *competent judges* of the beneficial or injurious effects of a new medicine; in fact, to speak plainly, the majority of practitioners are *incompetent* experimenters. Your cautious and clear-headed physician steers clear of the new drug, until such a time as he sees the conclusions of some eminent writer in regard to it; then, backed by authority, so to speak, he can anticipate the exhibition of the various phenomena produced by the new remedy; he uses it with a full knowledge of what good it will accomplish, not blindly like your incompetent experimenter. It is to those talented men, who for years have labored in the laboratory and the hospital, from a sheer love for our noble science, that we, the lotus eating practitioners, must look for reliable information regarding everything new that springs up in the medical field. The hospital is the place for experimenting; there, the effects of a drug can be carefully and intelligently watched, so that no harm results to the patient; if

the intelligent experimenter, discovering the efficacy in the new drug, and coming to understand its action perfectly, should introduce it among his private patients and note the histories of all his cases, in the articles, which we may suppose he afterwards publishes, so much the better; it is a guarantee which, coupled with a distinguished name, makes "assurance doubly sure." I shall not weary the reader with any longer prologue, only asking his indulgence for the time already taken up in what might seem at the first glance foreign to the subject. I wish to speak at this point of a new remedy which is already beginning to create a furor. Gentle reader if you have not already become acquainted with it, through paragraphs in the various journals, allow me to introduce you to the great *Eucalyptus Globulus* through its firm admirer and friend Dr. Gimbert, of Cannes, France.

Dr. Gimbert has probably paid more attention to the new drug and studied its effects more carefully than any previous experimenter. In 1870 he published a book, entitled "*Eucalyptus Globulus; its importance in agriculture, hygiene and medicine.*" This year (1873), commencing in the February number of the *Archives Generales*, is a most elaborate memoir on "the therapeutical applications of *Eucalyptus Globulus*." This latter memoir is especially addressed to physicians, and, as the author is a man of established reputation and has spent upwards of eight years (since 1865) in noting the effects of the drug, his paper cannot fail to be reliable; I propose to review it. It would be useless to go into the history of the plant, suffice it to say that it belongs to the *Order Myrtaceæ*, an order which includes dozens of species of the same genus, as, for instance, the clove, cajeput, pimento, etc. The gum of the tree known as the brown gum tree, of New Holland or Botany Bay kin, was brought to this country years ago. This tree reaches the height of 340 feet sometimes. One species of the tree is very common in Australia where it is said to attain a growth equalling if not surpassing the far famed "Caleveras County" grove of giants. Let us turn now to the medicine itself, be it the root, leaves, bark, twigs, resin, or any part whatsoever.

In 1865, Dr. Gimbert and Dr. Adrien Sicard were both busily engaged in analysing the resin of the eucalyptus; they both arrived at the same conclusions about the same time. The resin contained a volatile oil, a yellowish gum of a bitter and styptic

nature, and coloring matters. In 1870, Prof. Cloez presented his analysis of eucalyptus to the "Academy of Sciences." According to Dr. Cloez its composition was as follows: chlorophylle, cellulose, essential oil, resin, tannin, calcareous salts, and alkalis. The correctness of this analysis was confirmed last year (1872) by Drs. Delray and Rabuteau, who each published an elaborate memoir regarding the subject. Mr. Gimbert, after informing us of the before mentioned facts, goes into the minute study of the different ingredients composing eucalyptus; we shall epitomise his remarks as much as possible.

Tannin. "Its tannin cannot give to the eucalyptus any special place in therapeutics; however, associated with the leaves, oil (*essence*) and resins, it gives to the new medecine important tonic properties. This tannin precipitates the salts of iron. Tannin exists in enormous proportions in the Egyptian eucalyptus." Next our author treats of the resin.

Resin. "The resin exists in the ligneous substance of the eucalyptus and on the surface of its leaves; it is only necessary to rub a twig between one's fingers to discover it. In fact, all its organs are covered with a pitchy, sticky substance which is nothing else than the resin of eucalyptus. Its color is a whitish yellow which changes to red under the action of air and light; it has an aromatic, agreeable taste, sweet at first, but is bitter and styptic at the end of a few seconds. The properties of this resin, which is scarcely worth using internally, are useful in dressing atonic wounds.

Mr. Gimbert then goes into the details regarding the essential oil of eucalyptus or *eucalyptol*, extolling this agent as an antiseptic, antiperiodic, and anticitarrhal remedy. The manufacture of the remedy (*eucalyptol*) is dwelt upon. We are informed that there are two parts in every 100 of fresh leaves of the oil; one part in 100 of dry leaves; six parts in 100 of half-dry leaves. It will be seen that the fall of the year is the time to obtain the greatest yield; the oil is of course obtained by distillation. Mr. Gimbert describes the oil, or *essence*, as he calls it, as follows:

"*Essence of eucalyptus or eucalyptol.*—This preparation is the most important; it contains almost all the medical properties of the eucalyptus. The strong essence is a slightly green or uncolored liquid, exhaling a strong, aromatic odor, which some compare to camphor, essence of lavender, myrtle, or even, some-

times, of the rose. I saw a sample which had an odor distinctly marked of parsley. This great variety of odors is owing, according to us, to this fact: The manufacturers distill the leaves of several varieties of eucalyptus together. The eucalyptus globulus invariable furnishes the same product, in which one can detect, by smelling, the odor of camphor, myrtle, and turpentine, when the essence is fresh. This last characteristic does not exist in the old essences.

“This liquid, submitted to distillation, presents interesting particularities; a portion, the half about, volatilized at 175 deg.; a second part passed to a state of vapor between 188 deg. and 190 deg.; a third part volatilized at 200 deg. This analytical process permits us then to establish that there is in the essence of eucalyptus three different bodies; one alone is the principal one, characteristic in its species; it is that which boils between 170 deg. and 175 deg.; it is the *eucalyptol*; it gives to the essence its properties—it is the radical.

“The density of this liquid is 0.905 grammes. This relative lightness presents some advantages. When it is spread slowly on the surface of a glass of water, it forms one large and single compact drop, circular in form, which only reaches the edges of the receiver if the whole of it is violently shaken. The essence evaporates slowly upon the spot without separating and without mixing with the neighboring liquid. The essence (volatile oil) of cajeput presents similar phenomena. As Mr. Delioux has shown us, the essence of turpentine, exposed to the same conditions, separates itself rapidly into small drops, which touch the walls of the receptacle in such a manner that the lower liquids are exposed to the contact of the air. This fact permits us to attribute to the eucalyptol a great power of cohesion; it follows, then, that the bodies which it covers are preserved from the altering action of the air.

“The essence of eucalyptus is very fixed; it is resinified slightly. The strongest acids act on it slowly, so it preserves its properties a longer time than any known essence. Alcohol, ether, and iodine dissolve it, while water only holds it in suspension.”

Mr. Gimbert next studies the antiseptic properties of the drug, the which he discovered a long time back. Warming up with his subject, he at first claims that there is as much merit in the

antiseptic properties of eucalyptus as there is in the case of carbolic acid; then, finally, comes to the conclusion that it is a far better antiseptic. Let us listen to his own words: "Phenic (carbolic) acid is an acid antiseptic—difficult, dangerous to manage therapeutically; eucalyptol, on the contrary, is not acid, and may be administered in large doses to patients without producing accidents." Eucalyptol is then recommended for poorly-nourished, hospital patients suffering from gangrene or fœtid suppurations of any kind. Mr. Gimbert proposes to stop anything like the spontaneous generation of vibrions bacterians *et id omnes genus*, by the application of a sufficient quantity of his new antiseptic. It is given internally as an antiseptic in cases of typhus, dysentery, ulcer of the stomach, septicæmia, pyæmia, scarlatina, and diphtheria; also in fœtid bronchitis and gangrene of the lungs; in fact, in any case when there is a decided tendency towards the formation of pus. Eucalyptol is eliminated much more rapidly than any mineral antiseptic, and can be given while the patient is feverish, as it acts as a refrigerent. The following experiments, among others, prove its antiseptic power. I again quote from Mr. Gimbert's memoir:—

"Ten grammes of defibrinated duck's blood was placed in each of four test tubes on the 18th of June, 1872. I chose from preference poultry blood, because the globules are provided with a nucleus at their centre. One tube was treated by one gramme of a tenth solution of phenic-acid; another received one gramme of essence (oil) of turpentine; into the third we put one gramme of eucalyptol; while the last was mixed with ten grammes of a half solution of prussic-acid—in other words, we poured into the last tube five grammes of the toxic substance. Each tube was violently shaken in order to mix its liquid contents, and we saw produced a series of changes in their looks. The phenic (carbolic) acid gave a brownish, chocolate color to the blood, and partially coagulated it. When we examine the globules under the microscope for eight consecutive days, we discover that they become spherical, or oval and flattened as the case might be, that their borders presented very well-defined irregularities in shape, that they were darker and harder—like in the condition of affairs we see after poisoning from oxyde of carbon, which subject has been so well studied by A. Bernard, but then their structure remains intact. Evidently the acid combines with the coloring matter, the hemato-globuline. Four months after these examinations, the majority of these organisms remain intact; they are only slightly shriveled up. Since the month of June, we have never discovered the least odor of putrefaction in the mixture, although it must have been exposed to the air during the highest temperatures of the summer of 1872.

"Eucalyptol rapidly gives the blood a roseate color. Under these conditions, we first see the globule swell, although preserving the delicacy of its contour. Then it is depressed and discolored: its edges become imperceptible, and one sees very

soon no more than the brilliant nucleus, regularly placed, occupying the centre of the discolored globule. The expelled hemato-globule has been replaced by the essence. We find from thence the coloring matter in the liquid mass, where it is very probably oxydized. In fact, twenty-four hours after the experiment, this mixture became of a deeper color, reddish or coffee-with-milk color. Kept for the space of five months in the open air, it has not varied in its looks. At that date we found nothing more than a liquid, more or less fluid and granular, filled with numerous small drops of essence perfectly regular and very clear. The globules have then been dissolved by the eucalyptol, or at least they are reduced insensibly into granulations embalmed by this body. During the time that these transformations are taking place, no putrid fermentation comes on. At the moment we publish this it is still in the same condition.

"The blood treated with turpentine presents somewhat similar phenomena. The roseate color described in the reactions of the eucalyptus appeared here, but more slowly, and was not generalized. We saw produced immediately on the surface of the mixture a grayish, coarse layer, formed of grayish, molecular granulations, and small drops of turpentine scarcely perceptible. The globules losing, as previously, their hemato-globuline, which is deposited at the bottom of the tube; but after five days putrefaction commenced. To-day it still continues, while there was not a trace of it in the preceding mixtures.

"We now come to the examination of the prussic-acid solution. The blood globules for eight days preserved their form and their normal aspect, but at that date putrefaction commenced. I then added to the mixture of 20 grammes 20 drops of eucalyptol, and arrested the fermentation, which slightly commenced again in October. It is important to notice that in order to retain it in a similar condition to the preceding, we must add two grammes of eucalyptol. In October, I made this addition, and putrefaction was again immediately arrested. To-day we find under the microscope only colored granulations, and some small, more or less coherent congeres of misshapened globules."

The antiseptic or anti-fermentescible action of the eucalyptol, which is so manifest in these experiments, is not less evident if we experiment upon living beings.

"For the space of five consecutive days we injected every morning into two strong young rabbits 20 drops of this essence. On the sixth day, we aspirated the blood directly from the veins of the animals. This blood at first had no odor, but an hour after its exposure to the air it exhaled the perfume of eucalyptus. This experiment was made the 23rd of June. Since then I have left the blood in the open air, which coagulated it normally; it has never fermented. It is dried, mummified, and always smelling strongly of eucalyptol. In this case the liquid had not been previously defibrinated. The reactions nevertheless have been identical. Here is a fact which again corroborates this result: June 23rd a clot of fresh blood was liberally sprinkled with prussic-acid; July 10th it was putrefied. I then added the eucalyptol, and the transformation was arrested. At the moment I write, it has not yet reappeared. A similar clot mixed with turpentine presented the same phenomena, which the eucalyptol likewise corrected."

These experiments have since been renewed on the blood of man and under the same conditions; they have given the same

results. It is probable that, if we would submit a subject to the continued action of eucalyptol, blood taken from the veins would resist petrefaction. In all cases, the hemato-globuline is driven from the globule, oxydizing outside, and the anatomical element is, as it were, embalmed. I tried the antiseptic action of the eucalyptol upon pus. Ten grammes of this liquid, already very odorous, was placed in contact with one gramme of our essence.

"The 10th of July, 1872, I amused myself pouring the liquid on the surface of pus, without making it mix. Little by little the essence penetrated the mass of anatomic elements and liquids. It assumed the appearance and consistency of honey; nothing in it was destroyed. In November the majority of the leucocytes were intact. They were yellow, their contours were clearly defined, and yellowish molecules fill the places of those which are broken up in the essence."

Having thus proved to our satisfaction that eucalyptol is a powerful antiseptic, our author now turns to study the physiological effects of eucalyptol on man and animals; they may be briefly summed up as follows: Small doses cause a fresh taste in the mouth, followed by a slight congestion of the mucous membrane. Large doses give rise to an irritation, much congestion, and a disagreeable feeling of warmth; stomachal and intestinal pain sometimes. Appetite, when small doses are given, is not affected—sometimes increases; when large doses are given there is usually anorexia. Capsules can be used to contain the eucalyptol; indeed, this is the most pleasant way of taking the medicine; the eucalyptol thus causing no irritation to the mouth, throat, or œsophagus. Taken during a meal is the best way; in other words, on a full stomach. In fact, the eucalyptol is such an irritant to mucous membranes that care must always be taken when it is used in large doses, as for instance in injections per rectum for dysentery, or per vagina when the uterus is ulcerated, a large amount of some mucilaginous emulsion must be used in such cases or hemorrhage is apt to be brought on if the crude eucalyptol be used alone. After a ten or twenty drop dose of eucalyptol has been taken, the pulse is quickened, a pleasant and agreeable excitation comes on with a rapid cerebral evolution of fancies and ideas; sometimes there is excitation of the genital organs. As if to apologize for this last-named fact, our author, with a true French *naïveté*, remarks: "When I have taken eucalyptol for cranial neuralgia, which is the consequence in my case of fatigue or insomnia, I am astonished, if I may use the expres-

sion, at the *chastity* of my sleep." After the delightful effects of the drug pass off, there is no stupidity, dullness, or headache as there is after the use of narcotics and alcohol; *au contraire*, the patients remain serenely happy.

If the effects of the new medicine are as charming as Mr. Gimbert claims, we may expect to find an infusion of the leaves on almost every table; the old-time expression "Will you come to tea?" will be replaced by the new expression, "come to eucalyptus,"—which sounds well for a change. Some individuals, however, cannot tolerate the drug; for in some cases congestion of the brain and palpitation of the heart occur. Persons of a lymphatic temperament stand the drug better than those of a nervous temperament. To the former, ten to twenty drops can be given; to the latter, five or six. Arterial tension is diminished, and the temperature falls from two- to four-tenths degrees after the eucalyptol is taken. If the use of eucalyptol is persisted in for a long period, an *asthenic* (as our author calls it) condition comes on. The thermometer shows a lowering of a degree and a half of temperature; respiration becomes slower, and the pulse weaker, sometimes falling to 50. This falling temperature is a sign that the drug has been pushed far enough. The ordinary movements of life become painful; some of the special sensations become blunted; in fact, a general muscular depression supervenes. The mind in the meantime remains clear; there is no confusion of thought; memory still sweetly lingers; language is preserved intact, as is also the eyesight—the pupils not changing in the least; at times the patient suffers from insomnia. The excito-motors connecting with the nervous centres become obtuse, so to speak. The patient usually becomes alarmed when these symptoms come on; a cup or two of strong coffee drives off the danger.

This asthenic condition rarely occurs in the young and vigorous, but can be easily produced on the old and weak. In the latter case it may become a toxic agent, killing its victim by acting on the gray substance of the cord, thus paralyzing its excito motor and reflex sensibility. Our author has had two cases under his charge where dangerous toxic symptoms were produced; both, however, happily recovered when strong coffee was freely given.

Eucalyptol may then be said to have three different series of

effects. First, we have a stimulant or anti-spasmodic effect; then if the drug be still used, the asthenic condition comes on; while finally, if the use of the medicine be carried still further, we have paralysis. The new remedy, it will thus be seen, is a powerful agent, requiring caution in its use. One of the cases mentioned before as having been poisoned by eucalyptol, had the dangerous symptoms supervene after having taken an eighty drop dose.

"The lung and intestines are the organs of absorption of eucalyptol: The lungs, kidneys, and skin are the organs which eliminate it," says our author, who denies the assertion of Mr. Gubler, that the lungs are the *especial* eliminators. Mr. Gimbert claims that the kidneys are the *especial* eliminators, from the fact that he can produce cystitis and urethritis by the administration of large doses of eucalyptol. Our author lays special stress upon the fact that the fibres of the *vessels* in the lungs are strongly contracted by eucalyptol, thus diminishing their calibre, and that sometimes the drug, in its efforts to eliminate itself, produces irritation of the bronchi, thus bringing on an increase of cough, and, in cases of tubercular deposit, hemorrhage. It is for this reason that Mr. Gimbert rather seems to hesitate about recommending the use of the drug in phthisis. The intestines generally support the use of eucalyptol very well; sometimes, however, the medicine produces gastralgia and colic, or bilious diarrhea if the liver be in a torpid condition. The use of laudanum along with the eucalyptol as an anodyne, is sometimes necessary. The urine of a patient taking eucalyptol is strongly impregnated with the odor of violets, as is likewise the case with the perspiration and breath. A patient under treatment becomes a perambulating perfumery shop; he is full of the sweet odor of spring violets—fragrance is exhaled all about him.

The urine, after the administration of eucalyptol, shows an enormous increase in the amount of urea excreted. Mr. Gimbert confesses that, in view of the fact that the temperature is lowered after taking the drug, the reason of this is hard to explain. He asks that it may be given a trial in uremia and gout, or in any of those diseases where there is supposed to be an extraordinary tendency of the urates to accumulate in the blood. Our author has used it in gout, and seems to think that it increased the tendency to articular attacks. Sometimes the use

of eucalyptol produces a pruriginous eruption; this disappears however when the medicine is discontinued.

We now turn our attention to a few preparations of this antiseptic, stimulant, anti-spasmodic, and antiperiodic remedy. In France it is already prepared and used in the forms of tinctures, syrups, infusions, and extracts of different strengths. The extracts are either alcoholic or ethereal. Mr. Gimbert usually uses iron and quinine associated with his extract, and noticed that very often the extracts have a tendency to provoke diarrhea. The crude eucalyptol can be used in the preparation of liniments or even by itself for external use, care being taken to drop it on flannel, which in turn should be covered by wadding, before it is applied as a local sedative.

The leaves of the eucalyptus, powdered, may be burnt in a room where there is a bad smell, and act thus as a disinfectant; it sometimes, when used in this way, calms spasmodic bronchitis. Made into cigarettes, powdered eucalyptus may be useful when smoked during asthmatic attacks.

The task of the reviewer, or let us say epitomizer, ceases here. The want of further space and the lack of further time prevent our going deeper into this truly elaborate memoir of Dr. Gimbert. However, the practitioner will find many little points in this paper, which he may use to advantage when the new medicine is once fairly *introduced*; in the meantime, *nous attendons*.

THE EYE AND ITS TREATMENT.

By J. W. WRIGHT. Coshocton, Ohio.

So little study and attention is given to the diseases of the eye and their treatment by the general practitioner, that a few words on the management of some of the most common affections may prove beneficial to the physician. Having for the past eight years made the diseases of the eye a study and practice, I can readily refer to several cases of blindness caused either by a neglect on the part of the patient, or the improper treatment by the physician in charge of the case.

The eye is affected with so many diseases, and there is so much study necessary to make one proficient in the special

treatment of its disorders, that it is not to be wondered at that the general practitioner is not well prepared for all cases; but there are some certain affections so frequent, and so dangerously destructive to sight, that it is surprising that they are not better studied and managed.

Inflammation of the eyes—or *sore eyes* as we often hear the expression—is no definition for any particular disease of that organ, for almost any disease of the eye will cause an *inflammation* of it and make it *sore*. Yet we find, in almost every neighborhood, one or more persons who have a positive cure for “sore eyes,” and I am sorry to say we find physicians occasionally who prescribe some favorite collyrium in all cases of the disease.

Of the various methods of treatment the local is most frequently used, consisting of collyria, more or less astringent, and almost always containing acetate of lead—commonly called *sugar of lead*—and other ingredients equally obnoxious. Acetate of lead is very dangerous unless used by one who understands what he is doing. It is not a remedy to be used at random. When ulceration of the cornea exists, the lead is liable to be deposited in the texture of the cornea, forming an opacity. The use of strong solutions of the nitrate of silver is subject to the same objections. I have known the incautious use of it to cause partial destruction of the folds of the conjunctiva, and adhesions between the lid and the globe. I do not wish it understood that these remedies should never be used, but I would guard the general practitioner against the incautious use of them or any other strong, irritating washes; for I am very positive that many an eye has been destroyed by just such harsh treatment.

When you are called upon for treatment in any eye trouble, you should make a strict examination of the member and its appendages. First, get a view of the globe, and ascertain, if possible, if there is any foreign substance in the eye. You will not be able to say to the contrary until you evert the lids, when very often you will find the source of trouble attached to the lid itself. If so, remove it at once. Give some mild collyrium, as morphia grs. v. to aqua pura 3 i; apply four or five drops every two or three hours, and advise the patient to bathe the eye frequently with cold water; and on retiring to bed to have a basin of cold water within his reach, and whenever the eye feels feverish to apply cloths immersed in the water to it, changing

them frequently. Generally this is all the treatment necessary. But there are other cases where a foreign substance enters the eye, or the eye is struck forcibly by some substance in such a manner as to cause a slight abrasion of the cornea, that the trouble does not end so easily or so soon. I have known slight abrasions of the cornea produce little or no trouble; but there are times, owing to the condition of the patient, when even a very slight abrasion causes a vast amount of pain, and very frequently the loss of an eye. If we find an ulcer beginning from such a cause then we must give the eye close attention.

While speaking of ulcers of the cornea, do not understand that all ulcers are caused by foreign substances. They have various causes. There is an ulcer of the cornea, common in children, of a strumous diathesis, from two to twelve years of age. We also often see other children, more healthy, when subject to cold and damp weather, and especially during teething, attacked with ulcers of the cornea. In these cases we rarely find both eyes affected similarly at the same time, but the symptoms often alternate—first on one, then on the other. Ulceration of the cornea may also be the result of granular lids, purulent ophthalmia, and other diseases.

In the treatment of ulceration, constitutional remedies will be found of very great importance. Tonics consisting of the preparations of iron, of which the solution of iodide of iron with quinia has been highly recommended. I am not able to say whether the iodide is any better than the citrate of iron with quinia; I have always found the latter very good. Be that as it may, we must use good tonics, enforce nutritious diet and warm clothing. A cathartic might be given at the start, but the plan of giving man or child frequent purges and enforcing a weak diet, with a view to cleanse the blood, is pernicious, and is only giving the ulcer a better chance to destroy the cornea. We should, if possible, touch the ulcer with a pencil of the sulphate of copper, or *blue stone* as it is frequently called, but we should *merely touch* it, and that not oftener than once a day or every two days.

If from the extreme sensitiveness of the eye, and especially if the patient be a child, we often have trouble in making direct application to the ulcer. In such cases we can raise the upper lid a little and merely rub the under surface of it with the pencil, when the medicine will come in contact with the ulcer.

This application is of more benefit than any collyria that could be used, and especially one containing nitrate of silver or acetate of lead, in fact, just such cases forbid the use of such remedies. But I can recommend a collyrium that will be of great benefit, especially if there be photophobia; it is the solution of atropia grs. ii to v, to aqua pura 1 oz. If there is much pain I add morphia sulph. grs. v to x; and we have an anodyne that in my opinion cannot be excelled. I am satisfied that a great many eyes have been entirely destroyed just because the use of atropia has been neglected. You may be positive of one thing—you will have a very few, if any, cases of staphyloma iridis after ulceration, if you have applied the atropia frequently.

A young man made application to me not long since with ulceration of the cornea. He had not injured his eye in any way, nor had had disease of the organ that he knew of previously; however, his general health was poor, appetite bad, and bowels irregular. The ulcer had so far progressed that the iris had become attached to the cornea at the point of the ulcer, (*Synache Anterior.*) The ulcer was large. There was considerable inflammation of the conjunctiva, great pain and lachrymation. I commenced treatment by giving him compound cathartic pills, enough to move his bowels quite freely; I then gave him the tonic of citrate of iron and quinine, touched the ulcer once a week for three weeks, (I did not see him oftener) and kept the solution of atropia constantly to his eye. Besides this I used a cup to his temple, not drawing any blood, and had him apply it every day while at his home, until the pain was banished. At the end of the third week I told the young man that his eye was as well as it would ever be, the ulcer was entirely gone, but the iris was still attached to that point in the cornea. I told him that he might keep up the use of the atropia and perhaps by keeping the iris on a stretch he might break the attachment, however, I had no idea such would be the case. He continued the use according to my directions. In two weeks he called again and happily the atropia had its effect: the iris was released, and the pupil looked almost as natural as ever; the cornea was almost opaque, but in time it will become very nearly as clear as ever.

ANTISEPTIC TREATMENT OF WOUNDS AND ABSCESSSES OF THE LARGER JOINTS.

By J. SIGAFOOS, M. D., Columbus City, Iowa.

Deeming the question of the antiseptic treatment of wounds not yet settled, I here report two cases with a few remarks in favor of it. I may report other cases in another article at a future date. As there seems to be a disposition with many authorities, to either ignore or positively condemn this practice, I think every surgeon and physician who is convinced of its superiority over all old methods, should come forward with their cases and arguments in its favor. In looking up this question I am sorry to find so much distinguished medical authority against it; but when I think I am right, I never surrender, though all men be against me; but I am happy to know that I have plenty of good company. Prof. S. D. Gross in his late edition says: "My experience, moreover, in private practice, has convinced me that abscesses may be opened, that wounds, as those made in the removal of tumors, may close, and that compound fractures may unite as readily without, as under the use of antiseptic agents. *I have never found any appreciable benefit from the use of carbolic acid.*" The italics are mine.

Prof. F. H. Hamilton in his late work on surgery, disposes of this question in about the same style. Erichsen merely says that Prof. Listen recommends the use of paste made of carbolic acid and whitening, instead of blood or collodion, in treating compound fracture. Now I think such sayings by such eminent authorities are much to be regretted, for unless other surgical writers of ability come to the rescue, we may be in danger of bidding a lasting farewell to the antiseptic treatment of wounds. But when I look into our medical journals, I take courage, for here we have abundant proof that many of the best medical men in every civilized country, are using antiseptic treatment, and consider it pre-eminently superior to all other methods.

It will not be necessary for me to discuss here whether or not carbolic acid is a swift destroyer of living germs or organisms which are found floating in the air, and are supposed to be the cause of producing much of the inflammation and suppuration that are usually seen in compound fractures, wounds of the large joints, etc. Suffice for me to say that I think such germs or

organisms have little or nothing to do with the production of inflammation and the formation of pus as usually found in the treatment of surgical cases, for who does not know that pus may be formed in shut sacks, where no such organisms could find access. It is not that carbolic acid is a powerful septicide that makes its use so acceptable to the surgeon. There are many other more powerful septicides, perhaps, than carbolic acid, but they are of little use in treating surgical cases. Sulphurous, and sulphuric acid and aniline are some such, but what power have they over inflammation? Who would be willing to trust to either of them for even one day? Chloride of zinc and argent. nitrate are agents, that no doubt, exercise a powerful and beneficial influence in subduing inflammation, and in preventing the formation of pus globules, but in most cases are inferior to carbolic acid; the latter agent possesses one property that no other agent does with which I am acquainted, and it is of incalculable worth, *i. e.* an anesthetic influence. Much evidence might be adduced in proof, but as I intend to be brief, the two cases only will be cited.

The good results of carbolic acid are accomplished in various ways. First, by destroying nervous irritation; second, by preventing semi-organized pus globules; third, as a result preventing pyæmia; fourth, by producing local anesthesia; fifth, assisting in the production of healthy plastic lymph; sixth, all these combined preventing inflammation and constitutional disturbance with all their train of direful effects.

Until quite recently it was thought very desirable to obtain a free discharge of laudable pus in all cases that failed to unite by first intention. But now does not every surgeon know a better way? Certainly every one who is familiar with antiseptic treatment does.

Case 1st.—On July 11, 1870, was called to dress wound for Hattie B., æt. 8 years, who had been caught by a mowing machine coming up behind her, catching one inferior extremity and cutting it fully three fourths off. The wound completely laid open the ankle joint—cutting off the tendo achillis, posterior tibial artery, and also clipping off the articular projections of the tibia and fibula. The anterior tibial artery, tendons of the instep, together with the integuments, two and one-half inches

in width, were all that remained intact to save the sore from being a complete amputation at the ankle joint.

Prognosis: As a result of my former education in regard to wounds of the large joints, I informed the parents of the child that her life would be greatly jeopardized by making an effort to save the foot. But as they were very anxious a trial should be made in that direction, I concluded to gratify them, and at the same time test the virtues of the antiseptic method. I had been taught that "primary amputation would be required, when the joint is severely shattered, whether by gun-shot or otherwise, and the external opening is unusually large or complicated with lesion of the principal vessels and nerves of the limb." (Gross.) Also, "where a large joint is opened, even by a small incised or punctured wound, there is great danger lest such extensive local mischief and constitutional disturbance ensue, as to lead to the destruction of the articulation, with danger to the patient's life." (Erichsen.)

My experience in the past two or three years compelled me to materially change my mind on this important subject. I now, would undertake the management of such cases, with much less trepidation than formerly.

Treatment: After giving the patient a dose of morphine, the two small bones previously mentioned, which were hanging loosely in the wound, were removed. The posterior tibial artery was tied, and the wound was drawn together by strips of diachylon adhesive plaster, and covered with a light compress, over which a few turns of a roller were made. No splint or other apparatus was used; the patient was placed on a lounge and the foot kept in its proper place by folding on either side of it bed quilts, so arranged as to keep the wound from any strain. This was at 5 o'clock P. M. Having no carbolic acid with me, I returned home and did not see the case again until 9 o'clock A. M. next day. During my absence, complete reaction was established, and the patient now had some fever. The wound was quite tender and was discharging a good deal of sero-sanguineous matter. It was *now* that the antiseptic treatment was commenced. With a small glass syringe the wound was completely saturated with a solution of carbolic acid (one part of the crystals to twenty of water) the point of the syringe being inserted between, and without disturbing the strips of adhesive plaster. From this

period to the close of the treatment, a weak solution of carbolic acid in water (1 to 80) was used as a dressing, and *nothing else*. Bandages were kept wet in this and lightly wound around the ankle joints. By the third or fourth day, the wound was filled up with plastic matinal, but what was surprising to me, *not one particle of pus was discharged from the wound after injecting it with the stronger solution*; but most surprising of all, there was *very little soreness of the wound, and no inflammation or constitutional disturbance*. The patient was kept under the influence of morphine, quinine and verat. virid. for more than a week, and to these agents may be attributed, in some degree, the great ease and comfort of the patient during the treatment, a period of only twenty-six days, at which time the case was dismissed. The wound now was completely healed up, and what is most gratifying to us all she has good use of the joint. I had prognosticated an ankylosed joint as a certain result in case of her recovery if amputation was not performed. There is not the slightest lameness of that extremity; she walks a distance of one mile every day to school, and the same home again, as gracefully as any of her school-mates can do.

Case II.—June 15, 1872, was called up in the night to visit a lad æt 3½, who had been very sick for a week, and had been treated by another physician, but for some reason he refused to see him that night, though the little fellow was threatened with eclampsia. His knee was highly inflamed and much swollen, and presented every indication of having pus within the synovial sack. The boy belongs to a strumous family, several of whom have died of pulmonary disease. When interrogated, he said he had fallen and bruised his knee previous to its being inflamed.

Diagnosis: Acute synovitis stimulated into activity by the bruise he had sustained, and the scrofulous constitution. The prognosis was unfavorable so far as regards the free use of his knee joint. This prognosis was made because I had been taught, that “the termination of synovitis will depend mainly on its cause; when of simple and uncomplicated character, arising as the result perhaps of rheumatic influences, it will in most cases terminate in complete resolution; in other instances, however, plastic matter may be thrown out, which either assumes the form

of warty vegetations, or concretions within the joint, or of bands stretching across its interior, or incorporated with its capsule, occasioning more or less permanent stiffness. When synovitis arises from a wound, it usually goes on to suppuration within the joint, with superficial erosion or disintegration of the cartilage, and eventually, if the limb be not removed, to complete disorganization of the articulation, and to more or less complete ankylosis." (Erichsen, p. 708.) In the treatment of punctured wounds of the joints, the same authority says: "if suppuration has come on, long and free incisions should be made into the joint, so as to procure an early out-let of the pus; the part must be well poulticed, and an attempt made at procuring ankylosis, by the granulation and cohesion through fibrous tissue of the articular surfaces. Puncturing is worse than useless. By a puncture the pus cannot be evacuated from a deep and complicated joint; the air is admitted, and decomposition of the secretions, with irritative fever and pyæmia ensues." (p. 222.) Again, he says, on the same page: "the joint itself is not put into a worse condition by being more freely opened; for when once suppuration has been set up in it, even to a limited extent, destruction of its tissues must ensue, and the most favorable termination that can be expected is the production of ankylosis. * * * * When suppuration of a joint has taken place one of three things will happen; the patient may recover with a stiff joint, amputation may become imperative, or he may die from constitutional irritation. The most favorable result that can be anticipated is a stiff joint, and this the surgeon should endeavor to obtain."

am now prepared to say that the above lessons are all wrong I think is fully demonstrated in the results of this case.

Treatment.—With a narrow-bladed tenotomy knife, an incision about two lines in length was made into the sack at the most prominent point of the swelling, giving exit to at least ten ounces of thin pus; but it was evident that there was a large quantity of thick pus remaining which could not find an exit through the small incisions. A poultice of bread and milk was ordered to be applied until next morning, when with a small, glass syringe, the synovial sack was thoroughly washed by blowing into it, with a good deal of force, an aqueous solution of carbolic acid (1 to 60), which had the desired effect of break-

ing down the thick pus into a thinner fluid, which easily found its way out by the side of the point of the syringe. This operation was repeated every day for a period of one week—no pains being taken to prevent the free ingress of the air into the joint, as we have long since been convinced that the admission of air into a wound will do no harm when the antiseptic method is used. During the treatment the only application to the wound, or to the joint after the opening was made, was a weak, aqueous solution of carbolic acid (1 to 80), by having the joint enveloped with cloths and constantly kept saturated with it.

At the expiration of about a week no more pus was formed, and nothing escaped from the opening except a clear, straw-colored fluid, which I supposed to be true synovial secretion. The incision was then closed tightly by a small piece of diachylon adhesive plaster, which remained on until the opening healed and the patient was discharged. From the time the incision was made until the patient was dismissed, the swelling rapidly subsided, and he soon regained the complete use of his leg. In less than six weeks he was running around as nimbly as he ever did. The whole length of time he was visited by me was twenty-three days. There could be no mistake in the diagnosis in this case, as a small silver probe was passed down into the sack and examined with care.

So far as I know, this method of dealing with such formidable cases as this is novel; and from quite an extensive experience with carbolic acid in the treatment of many other cases, consisting of wounds, burns, abscesses, fractures, etc., I feel confident that the day is not far in the future when nearly all surgeons will be making a more free use of the "antiseptic treatment of wounds, bruises, and putrefying sores."

LECTURE ON THE LOCAL AND GENERAL SYMPTOMS OF CONTRACTED GRANULAR KIDNEY.

By GEORGE JOHNSON, M. D., F. R. S., Physician to King's College Hospital; Professor of Medicine in King's College, London, etc.

[Concluded from page 179.]

Theory of Uræmia.—In attempting to explain these nervous symptoms, I assume it to be indisputable that they are the result of the blood being deteriorated, partly by diminution of its nor-

mal constituents, but chiefly by retention and accumulation of urinary excreta. There are two ways in which it is probable that the brain and its functions may be injuriously affected by this blood-deterioration. First, the cerebral tissues, fed with poor and poisoned blood, may have their nutrition impaired, and may in various parts undergo structural changes analogous to those which are often demonstrable in the texture of the retina. Second, it is probable that some of the cerebral symptoms, more especially those which come on and pass away suddenly, are directly due to temporary interruptions or hindrances of the circulation through certain regions of the brain, consequent on excessive contraction of the minute arteries. In my lecture on the Pathology of Epilepsy (published in the *British Medical Journal*, March 21st, 1868), I adduced many facts and arguments in support of the theory that the immediate cause of an ordinary epileptic convulsion is sudden and extreme anæmia of the brain, the result of excessive contraction of the minute cerebral arteries.

Our increasing experience of the various forms of nervous disorder which may result from so purely mechanical a cause as embolism, in vessels of various sizes and in different regions of the brain, gives additional support and probability to the theory, that many of the cerebral symptoms resulting from uræmia may be explained by a defective blood-supply to certain parts of the brain, consequent on arterial contraction. An arrest of the circulation through a portion of the brain involves immediate suspension of function in that part, with perhaps a disorderly action in subordinate and correlated parts. Thus amongst other symptoms of nervous disorder, maniacal delirium and acute chorea have sometimes been found associated with, and probably have been directly caused by, mechanical plugging of minute cerebral vessels; the plugging being a result of embolic particles of fibrine detached from the so-called warty vegetations on a damaged mitral or aortic valve. Again, sudden and complete blindness in one eye may result from embolism of the *arteria centralis retinæ*; partial and pitchy blindness from embolism in one of its branches. It is in a high degree probable that uræmic vertigo, amaurosis, delirium, convulsions, and even coma, may in some cases be explained by partial or general cerebral anæmia, the result of excessive arterial contraction excited by the presence of impure blood. I do not ask you to adopt this as a complete and final explanation of the phenomena, but suggest it as a theory to be tested by the results of further observation and research.

Let me add that in some cases, notwithstanding the scantiness and ultimately the almost complete suppression of urine, uræmic symptoms are almost entirely wanting, and consciousness remains until death occurs from exhaustion. In some at least

of these cases the uræmic symptoms are probably prevented by the occurrence of incessant vomiting or purging, which, while it rapidly exhausts the patient, favors the escape of noxious impurities from the blood. The cessation of the discharges is sometimes quickly followed by symptoms of uræmia.

Nervous Dyspnœa.—A common and very distressing symptom in the advanced stages of the disease is a peculiar form of dyspnœa. I am not now referring to the persistent dyspnœa which results from the œdema of the lungs, from hydrothorax or hydro-pericardium, but to dyspnœa coming on in paroxysms, and especially at night. In some cases the attack resembles asthma, and there are loud sibilant sounds, apparently the result of bronchial spasm; while in other cases the heart's action is rapid and feeble, and the breathing hurried and laborious, with loud puerile respiration over the lungs. There is evidently no want of moving air in the lungs, and the disturbed circulation and breathing appear to result from some morbid influence of the poisoned blood upon the nervous centres. This distressing form of dyspnœa, which recurs in paroxysms night after night, is, in fact, a form of uræmia.

Disease of the Liver.—In a large proportion of fatal cases of contracted kidney, the liver is found more or less diseased, sometimes enlarged and indurated or fatty, more commonly cirrhotic and contracted. Alcoholic excess may, and often does, excite at the same time cirrhosis of the liver and granular contraction of the kidney. With the cirrhotic liver there is often ascites. When ascites exists without anasarca, or remains after the removal of anasarca, and so forms the prominent dropsical symptom, serious disorganisation of the liver may always be suspected.

Diagnosis.—In addition to what I have said of the symptoms and progress of the disease, I have yet some hints to give you on the subject of diagnosis. The state of uræmic stupor or drowsiness, with a dry tongue and sordes on the teeth, may be mistaken for typhus or enteric fever. The difficulty of diagnosis is increased by the fact, that in some cases of typhus and enteric fever, when there is much cerebral oppression, the urine is often scanty and albuminous, and it sometimes contains granular casts. A close attention to the entire history of the case, and a careful examination of the urine, will seldom leave you in doubt. The specific fever-eruption, when present, is decisive. The thermometer will assist you. The temperature is higher in fever than in uncomplicated uræmic poisoning. Bear in mind that a patient with chronic renal disease may, in addition, have a specific fever—a complication which is usually fatal. With regard to indications afforded by the urine, remember this, that although during the progress of typhus or typhoid fever there may be an acute and transient disintegration of the renal gland-cells, as indi-

cated by the appearance of granular casts—not easily to be distinguished from those which occur in cases of chronic desquamative disease—yet there is this difference, that whereas in the advanced stages of chronic desquamative disease the urine is pale and of low specific gravity, the albuminous urine of fever is usually of deep color and rather high specific gravity. It is important to bear in mind that granular casts, with albumen, may appear temporarily in the urine as a result of other blood-poisons than those of typhus and enteric fever. I have seen them in cases of pneumonia, erysipelas, and pyæmia. Once, in a case of pyæmia, I found granular and large hyaline cysts exactly like those represented in Fig. 15, but the urine was of deep brown color, and of normal specific gravity; and after death, which resulted from pyæmic abscesses in various parts, the only disease found in the kidney was a recent result of pyæmia. You see, then, that, although the observation of the various forms of tube-casts is of great practical value as an aid to diagnosis and prognosis, yet a too exclusive reliance upon this microscopic evidence may mislead you. When, after a careful inquiry into the history of a case, a doubt exists as to renal disease being recent or of long standing, the evidence of hypertrophy of the left ventricle of the heart without valvular disease, but with a full and firm radial pulse, points to chronic disease in an advanced stage.

I have seen several cases of subacute renal disease occurring in men about middle age, as a result of overwork and anxiety, in which it was difficult to decide between acute and chronic disease. I have preserved the urinary sediment from three of these cases; and although the first case occurred nearly fifteen years ago, the tube-casts are as well seen as when the specimen was recent. You may see these specimens under the microscopes on the table, and, having carefully inspected them, you may recognize their like when you meet with them in practice. One case was that of a solicitor aged 40; another a merchant aged 56; another, a clergyman aged 45. The symptoms and the condition of the urine were alike in all. There were great prostration, vomiting, bleeding at the nose, and in one case from the gums; no dropsy, ultimately a typhoid condition, and unconsciousness shortly before death. The urine was blood-tinged, the specific gravity from 1009 to 1017, moderately albuminous. A rather copious sediment was composed of dark granular and large hyaline casts, with scattered blood-discs. Some of the granular casts had a blood tinge, and it is probably that they were in part composed of disintegrated blood. After death, in the only case examined, the kidneys were found somewhat enlarged, soft, and congested. Some tubes were injected with extravasated blood, and others, opaque, with desquamated and disintegrated epithelium. In cases of this kind, although the prognosis is very unfavorable—in fact, all the cases that I have seen have died—yet the disease is

not so inevitably fatal as chronic desquamative disease in an advanced stage, and therefore it is important to distinguish between them.

Prognosis.—On the subject of prognosis, I have but little to add to what I have already said. Chronic desquamative disease, as a rule, tends gradually to a fatal termination. The rate of progress varies much in different cases and at different periods of the same case. You will remember what I said as to the evidence to be derived from the amount as well as the character of the sediment of the urine. The most trustworthy prognostic indications are to be obtained by comparing the state of the urine with the general symptoms. When, with a condition of urine indicating advanced degeneration of the kidney, there is evidence of hypertrophy of the left ventricle, with an unperpiring skin; when, with a diminishing secretion of urine, or even without a marked decrease, symptoms of uræmia begin to appear, the disease is generally not far from its fatal termination. You cannot be too cautious in giving a prognosis. The symptoms of chronic renal disease are sometimes much aggravated for a time by some imprudence in diet, by fatigue or anxiety or exposure to cold. The patient may apparently be on the verge of uræmic coma, or he may have a fit of convulsions: yet, under appropriate treatment, these formidable results of his indiscretion or his misfortune, may pass away, and, in a few days, he may be apparently no worse than he was before the occurrence of this temporary disturbance. The uræmic symptoms which are not traceable to an obvious external exciting cause are, as a rule, more serious and intractable than those which result from influences capable to some extent of being removed or counteracted.—*British Medical Journal*.

BROMIDE OF POTASSIUM.

BY M. GONZALES ECHEVERRIA, M. D.

Reflex reactions are lessened under the influence of the bromide. The tactile sensibility of the pharynx has been lost and deglutition impeded in every case of complete bromism, all liquids passing then through the nose or into the larynx. This, however, I repeat, has been an accident of bromism, whereas deglutition has continued unimpeded in every instance until the extreme physiological effects of the salt have been induced. The sensibility of the pharynx is, indeed, blunted or considerably diminished by the bromide, and more so in the case of children. A curious illustration of this fact was exhibited by a girl, ten years old, who had become epileptic after scarlatina, and who, while taking ninety grains of bromide daily, had a

fish-bone imbedded in the right pillar of the fauces; no distress following for four days, at which time the parents became alarmed at the fetidity of her breath and salivation, which disappeared upon the removal of the fish-bone from the palate.

Loss of taste has been frequently complained of in the beginning of the use of the bromide, but has not persisted, to my knowledge, in any case.

The sense of smell may become equally affected by the bromide of potassium, not from the hyper-secretion from the Schneiderian membrane, but from the diminished sensibility of the nerve. I have observed such substances as tobacco, snuff, ammonia, etc., to excite no sneezing.

The bromide of potassium may originate, not seldom, a congestion of the conjunctiva, with muco-purulent discharge from the eyelids, the eye becoming very red and sensitive to light.

Fourteen epileptics—five males and nine females—complaining of diplopia while under the use of bromide, but among a larger number there was permanent strabismus wherever the full physiological effects of the bromide were induced.

Irritability of temper has frequently attended the administration of the bromide of potassium, as a transient phenomenon in the first few days. In some instances of epilepsy without insanity, the bromide has superinduced mania.

I have little to add to describe the peculiar phenomena of bromism. They are: congestion with swelling of the fauces and of the tongue, redness of the conjunctiva, cheeks and nose, dilatation of the pupils, congestion of the retina, dimness of sight, diplopia, thickness of speech, slowness of the pulse and respiration, decreased temperature of the skin, increased secretion of the salivary glands and kidneys; in some instances hallucinations of sight or hearing, and mania or melancholia, have shown themselves, the former of a suicidal nature. Deafness may occur in some cases, upon the swelling of the fauces extending to the Eustachian tube, but it readily disappears on discontinuance of the bromide. The anæsthesia of the skin and mucous membranes becomes very conspicuous, as also a tottering gait, with inability for steady exertion of any kind (writing, buttoning up the clothes, etc.), and above all, an overwhelming drowsiness. I have further observed, in six males and nine females, a loss of power over the sphincters, with an unconscious passage of urine and excrement; two of the males, and four of the females, were children. The appetite to eat, and to smoke or chew tobacco has never been completely lost, even while the patients were under large doses of bromide of potassium.

I cannot say that bromide of potassium has been observed to exert any special uniform effect on the derangement of menstruation attending epilepsy with the females under my care.

I may state that throughout my long experience with the brom-

ide of potassium I have never met with any fatal result from its long continuance in the manner here described, and I have used it, within the last twelve years, in cases of epilepsy and epileptiform diseases certainly amounting to more than six hundred, as evinced by the hospital records.

The bromide of potassium, by itself, has not in epilepsy the beneficial effects which it acquires when combined with conium and ergotine, to suspend reflex excitability of the spinal cord, which is one of the most important elements in the production of convulsions. It is also necessary to remark that ordinarily the hypnotic properties of the bromide of potassium are powerless to subdue mental excitement in epilepsy or insanity, unless we administer the salt associated with some other narcotic,—a fact of great practical value, but hitherto unnoticed by authors. In epileptic insanity, in mania, in delirium tremens, large doses of bromide of potassium, given alone, generally fail to put the patient to sleep; if any drowsiness be superinduced, it does not last long, and on the patient coming out of it, the maniacal excitement, whether epileptic, alcoholic, or of any other nature, recurs with its former intensity. Let, however, conium, cannabis indica, hyoseyamus, or, better yet, ergot of rye, be added to even moderate doses of the bromide, and the result will be a prolonged and refreshing sleep, followed by quietness. A combination of chloral and bromide of potassium in equal parts, from fifteen to twenty grains of each, is also useful to produce sleep when either of them alone fails as an hypnotic. Experience, therefore, bears me out in stating that, ordinarily, in insanity large doses of bromide of potassium are ineffectual to induce sleep or to arrest great mental excitement, unless associated with some narcotic. My results with opium in epilepsy have been of an unfavorable character. I have found that opium has only tended to increase the violence and severity of the attacks, and has proved powerless against the maniacal excitement attending the fits.

Large doses of bromide of potassium do not operate favorably when suddenly administered in the commencement of the treatment; but in all cases it is necessary that epileptics should be brought occasionally under the full physiological effects of the bromide of potassium, and then discontinue it until the effects of the bromide have subsided; then resume the ordinary doses of the salt, and again increase them when the attacks occur, in order to secure a permanent arrest of the disease. Tolerance of the bromide by constantly using larger doses than one drachm in twenty-four hours, when the fits are checked, should be avoided. Nor should the dose be ever augmented and thus prolonged, unless the condition of the patient indicates a threatening attack, or it is required by the severity and frequency of the fits. Epileptics only exceptionally bear more than one drachm

of bromide of potassium, daily continued, without soon exhibiting symptoms of bromism.

It is of the utmost importance, when the fits have disappeared for several months, and recovery seems perfect, not to stop suddenly the use of the bromide of potassium, but to decrease its quantity, and to discontinue it in the slowest manner, after a protracted treatment, and seeing every indication that the epileptic habit has been overcome.

One of the simplest and safest ways of preventing bromism is by repeated administration of strong coffee. I order coffee always as a medicine and as an important part of the epileptic's diet, for it stimulates the brain, specially opposing itself to rapid disassimilation, and thereby lessening structural changes. In addition, the operation of the bromide is helped by coffee drunk with the meals or throughout the day, and in this wise the supervention of bromism is very much delayed, epileptics being thus enabled to take twice as much bromide without the necessity for suspending it, which I deem important to secure the arrest of the disease. I have most closely watched the effects of coffee in the epilepsy, and I have every reason to believe that it does not produce any of the evils generally deprecated. On the contrary, epileptics accustomed to it, experience a comfortable feeling, and ask for it to rouse themselves from weakness and depression. If administered immoderately from the beginning, it may not be borne with ease, and may, like all stimulants, originate unpleasant effects.

I may establish the following conclusions from the foregoing clinical facts:

The bromide of potassium is not a *specific* for epilepsy, but may contribute most efficiently to arrest the fits.

Its benefits increase and are better secured by administering it combined with conium, ergot, arsenic and strychnia.

Sixty grains is the average daily amount of bromide of potassium required in ordinary cases of epilepsy; but it is necessary to keep epileptics, at different intervals during the progress of their attacks, under the full physiological effects of the bromide, to suspend it until the bromism is dispelled, and then to resume the salt again in ordinary doses.

The bromide of potassium alone exerts little or no effect on the attacks of *petit mal*, unless associated with large doses of ergotine (gr. vj to gr. xvj) and conium. In epileptic insanity, or in any other form of insanity, the hypnotic and sedative properties of the bromide of potassium are usually unavailable when the salt is administered alone, a refreshing sleep and subsequent quietness being more readily obtained when the bromide is prescribed along with some narcotic, such as conium, cannabis indica, hyoscyamus, and still better with full doses of ergotine.

The bromide of potassium should never be discontinued suddenly, even when the epileptic fits have not recurred in a long time, but the dose of salt should be gradually decreased, and the treatment left off insensibly, when there is every indication of the complete eradication of the epileptic habit.

Nothing proves that the efficacy of the bromide of potassium in epilepsy bears any relation to the existence or severity of the bromide eruption. Arsenic prevents or mitigates it, and acts as a valuable tonic. Subcutaneous injections of strychnia are the most efficient remedy to re-establish the depressed peripheral circulatory activity, and to operate also as a stimulant in epilepsy.

Coffee is one of the best means of correcting the unpleasant action of full doses of the bromide; it favors its effects, is in addition an invaluable cerebral stimulant, and should always constitute an important part of the epileptic's diet.

Bromide of potassium, when taken by the mother in large and prolonged doses, does not seem to have any noxious influence on the fœtus.

THE BLISTER TREATMENT OF RHEUMATISM.

Dr. T. B. Peacock, of St. Thomas' Hospital, says in the *British Medical Journal* :

I have now been in the regular use of the blister treatment of rheumatism since 1865. When I first employed it, it was only tentatively, one, two, or three blisters being applied at the same time or in succession, and in conjunction with other remedial means, and the general impression which I formed was not very favorable. Subsequently, I was induced to apply the blisters much more freely, three or four, or even six, at a time, and in rapid succession a still larger number; and I have been led to form a high opinion of their usefulness when thus used, and to confirm what has been said in favor of the treatment by Dr. Davies. The blisters are generally two or three inches wide, and sufficiently long to encircle the limb. They are placed above the chief joints that are affected, and are usually put on in the after part of the day; in the morning, or when they have risen sufficiently, the serum is let out, and the surfaces are covered with warm linseed meal poultices, and these are continued for several days. The treatment has been objected to as unnecessarily severe and attended with much suffering to the patient; but this is not correct. I scarcely remember an instance in which the patient, though specially questioned on the subject, has found fault with the treatment; and I have often heard them say that the pain caused by the blister is not to be compared

with that of the rheumatism. Nor have I ever seen any serious inconvenience of any other kind caused by the blisters. Sometimes, however, there is a temporary increase of suffering when the blisters begin to draw, and the temperature rises, and the patients are restless at night; but generally there is very marked amendment in the morning, both the swelling, tenderness, and pain being reduced, and the constitutional disturbance relieved. In some cases, however, the local symptoms may not be immediately benefited to any marked degree, and the blisters must be repeated, being applied above to the seat of the first vesication; or, after a few days' cessation, the same joint may be again affected, and in this case, too, the blistering must be repeated. The occurrence of second attacks in the joints first affected is not, however, by any means confined to cases treated by blisters, but equally occurs when constitutional means have been had recourse to.

Generally with the local means, constitutional remedies, especially the bicarbonate and nitrate or tartrate of potash, are given more or less freely, according to the severity of the symptoms. The cases in which I have employed the blister treatment are the following:

First, when several joints are coincidently and severely affected, the sufferings of the patient are great, the constitutional disturbance severe, and the temperature high; in cases of this kind, three, four, or even six or more, blisters are applied immediately the patient is seen; and as many more may be put on in the course of a few days, in rapid succession, as other joints are involved, or when those first blistered are not materially relieved or again become affected. From this treatment I have seen the most satisfactory results, both the local and general symptoms being greatly relieved by the free blistering, and the duration of the disease being curtailed. It is evident, also, that, if the active stage of the disease be shortened, as this is the period during which the internal complications are most apt to occur, the frequency of such complications will be lessened. It is in cases of this kind that the blister treatment is most efficacious, the benefit obtained being apparently directly proportionate to the number of joints coincidently affected, to the severity of the local symptoms, and to the freedom with which the blisters are applied to the whole of the parts involved, so that an immediate and decided impression is produced upon the disease. In cases where only two or three joints are affected, though these may be all blistered, the relief obtained to the constitutional disturbance is less decided, and where the pains are rather diffused over all parts of the body than limited to certain joints, the remedy can not be satisfactorily employed. I have mentioned that the occurrence of internal complications may be prevented by the early and free employment of blistering; but in some cases we

have proof of much more decided benefit being produced, for I have seen cases in which there was very threatening symptoms of cardiac disturbance, such as are ordinarily followed by serious disease of the pericardium or valves, entirely relieved by the free blistering of the inflamed joints, and the cardiac symptoms apparently arrested.

In cases of this kind, the free discharge from the vesicated surfaces operates apparently as an outlet to the *materies morbi*, and so causes the disease to exhaust itself on the external and less important parts of the body. So satisfied have I been with the effects of the blister treatment in cases of intense rheumatic fever, that I have gradually reduced the use of the internal remedies, giving much smaller doses of the bicarbonate or nitrate of potash, or only employing coincidentally some slight diaphoretic, as the tartrate of potash.

Secondly, I have known very satisfactory results from the blister treatment in cases in which the symptoms, both constitutional and local, were less severe; but where the patient's strength was greatly reduced, either from previous attacks of rheumatism or other causes, or when the heart was already seriously diseased. In cases of this kind, the use of remedies which exercise any depressing influence is to be avoided if possible. I have, therefore, sometimes relied on the blister treatment alone, or in combination with tonics, quinine, and iron, and with very good results. The blisters, even though freely applied, do not depress the strength so much as the use of alkalies or other constitutional remedies. When the heart is diseased from a previous rheumatic attack, and when, as is generally the case, the patient is very aemic, the use of depressing remedies is especially objectionable. In such cases, also, the attack should be arrested as quickly as possible, lest the heart should again become involved; and I know no means so likely to accomplish this as the free blistering of all the affected joints.

Thirdly, another class of cases, in which the rheumatic affection rather involves the smaller joints, what is often called rheumatic gout, and in which the constitutional disturbance is of a more subacute character, is also very often benefited by the use of blisters, though less decidedly than the two other forms of disease. In cases of this kind the blisters need not, however, be employed so freely as in the former cases; I also generally combine them with the internal administration of small doses of iodide of potassium, bicarbonate of potash and colchicum, and often with bark or quinine. As we all know, cases of this kind are very apt to be tedious, whatever be the plans of treatment which we adopt; but I believe that the combination of local and general remedies which I have named is generally the most efficacious means of relief.

Lastly, there are cases in which the disease rather assumes

the neuralgic than the ordinary rheumatic form, where the pains follow the course of certain nerves, and are often very persistent, in which the application of blisters is very beneficial. The treatment is a very old one, but it is one which has perhaps, of late years, received less attention than it deserves.—*Virginia Clinical Record.*

ON MIGRAINE.

By WILLIAM DALE, M. D., Lond., Plymouth.

Having read with considerable interest the articles on Migraine which have lately appeared in the *Practitioner*, I cannot withhold my own experience, which, being personal and long-continued, may be of some value in the discussion of the subject. My note shall be brief; nevertheless the case shall be fully stated.

From the age of twelve years or earlier, up to within four or five years of the present date, or until I was upwards of forty years old, I have been a great sufferer from migraine, or, as we are accustomed to call it, "bilious headache." I do not recollect the frequency of the attacks in the earlier part of my life, but I may say for twenty years I had them once a month at least, and for nine or ten hours the pain and distress they gave rise to were almost unbearable.

The commencement and course of an attack were, with rare exceptions, strikingly unvaried. When I awoke after a good night's sleep I felt slight pain in the head, sometimes amounting to nothing more than heaviness over the eyebrows, and sometimes only a peculiar disorder of vision, giving rise to an appearance as of a portion of a venetian blind quivering rapidly close to the eyes, though no venetian blind was in the room. From these symptoms I too well knew the attack was upon me. The pain in the head gradually increased as the day advanced, generally being diffused over every part, so as not to be localized at all; and at other times, perhaps just as frequently, being confined to one or both eyebrows, which were then tender to the touch; but in the worst attacks the pain was internal, and there was no soreness externally. Towards noon I usually began to feel some nausea, and often vomited some intensely sour fluid.

This vomiting I encouraged by drinking lukewarm water freely: and by five or six o'clock in the evening I at length vomited two or three teaspoonfuls of *frothy mucus*, and, as if by magic, my sufferings terminated, and, except some amount of debility, I was quite well again. Very often I had a warning of what was coming on the preceding day, in a feeling of being

exceedingly well, or, to put the thing in the most expressive way, it was a feeling of never having been so well in one's life.

As regards the etiology in my case, which is the chief object I propose to myself in these remarks, I have always blamed the stomach—always believed it to be, in almost every instance, the *fons et origo* of the malady. I have, during the whole of my life, been very moderate and cautious as to diet; but if, by chance, and because nothing else was in the way, I have taken a dinner of hot and fat meat, more especially pork, mutton, or gross hashed meat, I have paid the penalty in a headache of more or less severity next day. I am also very temperate as regards intoxicating beverages, all my life using beer, wine, or spirits very sparingly; but whenever I have been tempted to go out of my usual course, and use things in excess—excess, in my case, being easily reached—viz., three or four glasses of wine, or a single tumbler of spirit and water, I might almost invariably expect a visit from my watchful enemy next day.

Nothing, for instance, would more effectually floor me than going out to supper and partaking of the various dishes usually set before you on such occasions, with the addition of two or three glasses of wine, or a glass of spirit and water to finish with.

This is “a plain, unvarnished tale;” and if experience can teach one anything, I think it teaches that, in my case at all events, the cause of the affection was a diseased stomach, and that all the rest of the symptoms were—neuralgic, if you will—but purely reflex in their character.

My professional experience, also, in other similar cases, has led me to the same conclusion. I therefore go further than Dr. Allbutt when he says, “migraine is not a mere trigeminal pain, with ‘cerebral’ vomiting, but that it is a complex affection in which abdominal and cephalic disorders go hand in hand, and in which treatment addressed to the former set of morbid events is at least as important as that which is addressed to the latter;” and contend that in many instances, at least, the cause of the headache is to be found in the disorder of the stomach, the nature of which seems to be but little understood. The secretion of the gluey *poisonous* fluid, which I have examined again and again without any definite results, and the almost magical effects of its expulsion from the stomach, appear to bear out my opinion.

But I must confess there are two or three things in immediate connection with my attacks which my view of the case fails to explain, namely, the unusual exuberance of spirits the preceding day, and the fact, not mentioned before, that any anxiety, overwork, or worry made the existing causes (not food, wine, etc.,) more certain in their operation; yet even this does no more than serve to show that our knowledge of causation in disease is still imperfect.

As respects treatment during the attack; in my own case, perfect rest in bed, and fasting, were at last the only remedies; for I tried many things at first, and for several years, without deriving the least benefit from them. This is also my experience as regards others; but of course, in the intervals of the attacks, all disorders of the system should be looked after, and all known exciting causes should be carefully shunned.

It only remains for me to add that, to my exceeding great comfort, for the last five years or so, my old enemy has left me, or at least he has only given me the very slightest intimations of his existence.

WHAT IS CINCHO-QUININE?

The chemical manipulation of the Cinchona or Peruvian barks reveals the presence in them of quite a number of most remarkable, complex bodies. No vegetable production, except the poppy, affords such a marvellous combination of valuable medicinal principles as the loxa and calisaya barks, and no substances have been studied with greater care or more intense interest by chemists. Nothing short of the subtle chemical forces controlled by the Infinite One could construct from the elements of the earth and air a bitter principle like quinia, or those other agents associated in bark, so closely allied to it physically and chemically. A handful of the finely comminuted fibres of the yellow bark, which resembles physically a dozen other varieties, is made to yield by the chemist, when treated with aqueous and alcoholic liquids and acids, a dark, bitter solution, unattractive in taste and appearance. If the process is skillfully conducted, or exhaustive in its results, there remains, besides the solution, a portion of woody fibre, inert and almost tasteless. It holds considerable coloring and some waxy matter, together with a little tannin; but the active chemical or medicinal principles have been removed, and are held in the dark liquid. The exhausted bark is not entirely worthless, for it may be dried and used as fuel. But what of the dark liquid? From this the chemist obtains, besides other substances, a portion of beautiful, white, silky crystals; not wholly of one distinct kind, but of several, all of which possess about equal chemical and therapeutical importance. No wonder it seems to the uninitiated in chemical manipulation, a difficult work to perform. It is, however, quite easy to the thoroughly instructed. The first principle isolated may be the quinia. This is not held in the bark in its naked alkaloidal condition, but locked up in the form of a salt, with another principle called kinic acid. In the bark it is kinate of quinine. We isolate the quinia, tear it from its embrace with kinic acid, throw that away, force it into a kind of matrimonial alliance

with sulphuric acid, and in this condition of sulphate of quinia, use it as a medicine. This kinic acid marries into several other families resident in the bark, prominent among which are cinchonia, cinchonidia, quinida, etc. Precisely how many of these alkaloidal principles the different kinds of barks contain, is unknown; but it is safe to assume that there are as many as four others which, although not distinctly pointed out, are tolerably well recognized. These kinates are all kindred in nature, and all labor to the same end, when isolated and set to work as therapeutical agents in the human system.

In one hundred ounces of good yellow bark, we obtain about two and three fourths ounces of quinia, and two ounces of cinchonia, with variable amounts of the other principles, but less than the two named. It is to be regretted that we cannot remove the different families of kinates from the bark in their natural state of saline combination. It seems reasonable to suppose their action upon the system would be more salutary than in other forms. It is easy to isolate the kinic acid, and having the alkaloids, the kinates of quinia, cinchonia, etc., can be reformed; but in these chemical changes so much disturbance to natural organic combinations is made, that, practically, we realize no marked advantages. It seems unnatural to force a natural alkaloidal base out of its association with an organic acid, and recombine it with a mineral acid. This we do in the preparation of a sulphate of quinia. However, as it has served so good a purpose for many years, it is not best to quarrel with the theory.

All the alkaloids of bark possess about equal febrifuge and tonic proprieties, when isolated and administered in that condition. This has been proved over and over again by all competent chemists and physicians, from Drs. Gomez, Duncan, Pelletier, Caventou, down to the time of Liebig's researches, a quarter of a century ago, and from that time to the present, by a hundred careful chemical and medical observers.

How the one alkaloid, quinia, came to supersede the others, and drive them into the background, is easily understood, when we remember that it was about the first that was distinctly eliminated, studied, and experimented with; and the eclat it acquired caused everything else to be neglected. The natural bark, holding all the alkaloids, the quinia, cinchonia, quinida, etc., has always been observed to produce more efficient and prompt results, both as a tonic and febrifuge, than the quinia, or either of the other principles in themselves; but holding also, as it does, tannin, gum starch, fibrine, and coloring matter, all of which are medicinally interfering or inert, its use is rendered inconvenient and inadmissible in many cases. Besides, it is apt to produce disturbance of the gastric functions of an unpleasant character. Acting upon the idea that the natural alkaloidal principles of bark, in their simple, unchanged condition, separated from the

gross, woody, and other matters, would better subserve all therapeutic ends than the barks themselves, or *any one* of the alkaloids separately employed, Cincho-Quinine has been prepared.

Cincho-Quinine contains no external agents, as sugar, licorice, starch, magnesia, etc. It is wholly composed of the bark alkaloids: 1st, quinia; 2nd, cinchonia; 3rd, quinida; 4th, cinchonidia; 5th, other alkaloidal principles present in barks, which have not been distinctly isolated, and the precise nature of which are not well understood. In the beautiful white amorphous scales of Cincho Quinine, the whole of the active febrifuge and tonic principles of the cinchonia barks are secured without the inert, bulky lignin, gum, etc. It is believed to have these advantages over sulphate of quinine:

1st. It exerts the full therapeutic influence of sulphate of quinine, in the same doses, without oppressing the stomach or creating nausea. It does not produce cerebral distress, as sulphate of quinine is apt to do, and in the large number of cases in which it has been tried it has been found to produce much less constitutional disturbance.

2nd. It has the great advantage of being nearly tasteless. The bitter is very slight, and not unpleasant to the most sensitive, delicate woman or child.

3rd. It is less costly than sulphate of quinine. Like the sulphate of quinine, the price will fluctuate with the rise and fall of barks, but it will always be less than the lowest market price of that salt.

4th. It meets indications not met by that salt.

VACCINAL SYPHILIS.

Great commotion has been recently raised in the English medical societies by Mr. Hutchinson, who reports several cases, thought by himself and others to be undoubted instances of syphilis induced by vaccination: but, after a somewhat careful reading, we must say, in the words of the old Scottish verdict, "not proven." To settle such a grave question, there surely ought to be required more than what the *Lancet* calls "the very small number of facts which so keen a clinical investigator as Mr. Hutchinson, with an enormous field of observation at his command, has been to detect." The following extract, also from the *Lancet*, ought to be well considered before hastily adopting the conclusions of alarmists.

"We think, then, that the influence of the whole group of cases related by Mr. Hutchinson must be decidedly in favor of the *possibility* of communication of syphilis by the inoculation either of the blood of a syphilitic vaccinifer, or of the serum

which oozes into the vesicle, *if the vaccinator be unwise enough* (these and the following italics are not in the *Lancet*) to continue to take fluid after the first drop of lymph—the true product of vaccination—has been exhausted. *Not one particle of evidence has been adduced to show that the true lymph can be affected with syphilis;* and, as our readers are doubtless aware, the evidence against such a possibility is enormously strong. And even the communication by blood, or by serum obtained after first emptying the vaccine vesicle, though it may now be admitted as a possibility, cannot for a moment be regarded as more than a very occasional result of these accidents. We are very glad to observe that Mr. Henry Lee had the sense and candor to point this out forcibly on Tuesday. He observed that, supposing constitutional syphilis to be communicable by blood or serum, it was plain that this was no necessary process, but only happened when the constitution of the person from whom the inoculation was received chanced to be in some peculiar state of ferment, which relieved the dormant activity of the syphilitic poison. This must certainly be true, or syphilis would be far more widely diffused in the world than it actually is. By these arguments it is evident that we reduce to a minimum the chances of vaccinal communication of syphilis; for the latter event *can only take place* when all the following conditions are simultaneously present:—(1) a syphilitic vaccinifer; (2) an active condition of the syphilitic element of the vaccinifer's blood; but, at the same time (3), an absence of such external symptoms of syphilis as would deter any commonly upright surgeon from using the subject of them as a vaccinifer; (4) the gross imprudence committed, of employing either blood or the serum obtained after the emptying of the vesicle. It is an absolute impossibility that all these conditions can be more than very rarely fulfilled, and we therefore think that Mr. Hutchinson is gravely to blame for the tone of his remarks in his concluding speech at the meeting. Those remarks, when translated by the imperfect understanding of the non-medical public, will convey a most erroneous impression as to the prevalence of vaccino-syphilis, and will aggravate in a perfectly unwarrantable manner the terrors of the laity."

MEDICAL GLEANINGS.

[From Nashville Journal of Medicine and Surgery.]

ANGER OF MORPHINE INJECTIONS, WITH CHLOROFORM INHALATIONS.—A good deal has been written about the union of morphine injections with chloroform inhalations to produce prolonged insensibility to pain after important surgical operations. M. Demarquay concludes, from a short series of experiments,

that it is a method liable to especial dangers, arising from lowering of the temperature.—*Medical Record*.

INCURABLE VOMITING DURING PREGNANCY.—In *The Doctor* of July 1st, you quote a few lines from a pamphlet written by Dr. Scipio Giordano, of Turin, the chief points given by him being as follows:

1. These distressing cases of irrepressible vomiting often lead to a fatal result.
2. The only remedy worth mentioning is the removal of the foetus from the uterus.
3. When the foetus has nearly arrived at term the sponge-tent may be used to dilate the uterine cervix.
4. But the bringing on abortion is a more difficult question, and many practitioners who would not hesitate to produce it in deformity of pelvis, would refuse their sanction in these circumstances.
5. But as to the means, this is not so easy a question, although Velpeaux and Cazeaux will have it to be very easy.
6. Abortion is more difficult the nearer the period of conception may be.

By your kind permission I will do myself the honor to allude to these points.

1. I quite concur in his opinion as to the fatality of these cases if unrelieved.

2. The remedy is the removal of the foetus.

2. As to the use of the sponge-tent, he says it *may* be used (but he is evidently not satisfied with it, for next, in No. 4, he speaks of the difficulty of bringing on abortion, and shows how he is backed up in his opinion by many practitioners, and then goes on to No. 5, as the means of bringing on labor).

He appears to be quite satisfied as to the benefit to be derived from evacuating the uterus, but is at a loss to know how it can be done speedily and with safety to the mother.

I have seen many of these cases, and brought them all, save one, to a successful issue, which, in my opinion, was lost through a want of decision; for, although the medical man promised to carry out my treatment he delayed for a few days, when the poor exhausted woman fainted, and died undelivered.

The plan I adopt is as follows: Dilate the os uteri with the finger, separate the membranes freely, so far as one can reach, then puncture the membranes, and let out the liquor amnii. The result of this proceeding will be the speedy and certain expulsion of the child and a gradual disappearance of the vomiting.

It will be found advisable to sustain the patient for a few days by means of enemata of beef-tea and brandy, and not to allow one single particle of anything whatsoever, under any

excuse or pretext, to be taken by the mouth, until vomiting has ceased, although a little ice to moisten the parched tongue is very grateful.

After the vomiting has entirely ceased for twenty-four hours, I give a little milk and lime-water (a desert or teaspoonful every hour), and next day slightly increase the quantity still observing the regular intervals.

And, lastly, let me speak of the sponge-tent. I have seen it used—I have used it myself repeatedly—but the irritation set up, without positively producing labor, and the time lost, have caused me to abandon it as being worse than useless; whereas, by the treatment of freely separating the membranes from the os and neck, and letting out the liquor amnii, the progress of labor is so certain, speedy and satisfactory, as to be only used to be appreciated.

The last case of the kind was seen, with myself, by Dr. Palfrey, Physician-Accoucheur to the London Hospital, who highly approved of the treatment, and was kind enough to speak of the method adopted, in the most complimentary manner. — *The Doctor*.

ABORTIVE TREATMENT OF BOILS AND WHITLOW.—Dr. Simon de Forges (*Review de Therapeutique*) advises the topical use of camphorated spirits as an abortifacient in boils and whitlow. In the former case the boil is to be rubbed eight or ten times, by the finger, dipped in the alcohol. He asserts that it is rare that, after this treatment, a boil goes on further towards supuration. In cases of whitlow, he advises the patient to dip the finger for some ten minutes in camphorated spirits. This almost always gives great relief of the pain, and often cures the complaint.—*Medical Press*.

COLLINS' REMEDY FOR THE OPIUM HABIT.—This proprietary article, now largely advertised as an “unfailing and painless remedy against the opium habit,” and sold at sixteen dollars per bottle, has been examined by a correspondent of the *Druggists' Circular*. He states that it is a syrup, colored with fuchsine, and containing a large proportion of *sulphate of morphia*.—*Pharmacist*.

BORAX AND THE NITRATE OF POTASH IN LOSS OF VOICE.—Dr. Corson, of Orange, N. J., states that some years since, while in charge of the class of “diseases of the chest and throat” in connection with the New York Dispensary, he was led, at the suggestion of a non-professional friend engaged in teaching elocution, to test the efficacy of borax and nitrate to potash in many cases of sudden hoarseness from cold, and the following are the conclusions at which he arrived:—

1. That in sudden hoarseness or loss of voice in public speakers or singers, from “colds,” relief for an hour or so, as by

magic, may be often obtained by slowly desolving and partially swallowing a lump of borax the size of a garden pea, or about three or four grains, held in the mouth for ten minutes before speaking or singing. This produces a profuse secretion of saliva, or "watering" of the mouth and throat. It probably restores the voice or *tone* to the dried vocal cords, just as "wetting" brings back the missing notes to a flute when it is too dry.

2. Such "colds" may be frequently "broken up" at the very commencement; and this restorative action of the borax to the voice may be materially aided by promptly taking, the evening previous to a public effort, dissolved in a glass of sweetened water, a piece of the nitrate of potass, or "saltpetre," a little larger than a garden-pea, or about five grains, on going to bed, and covering with an extra blanket. The patient should keep warm next day. This both moistens the dry throat and further relieves the symptoms of "cold" and slight blood-poisoning from suppressed perspiration, by re-opening the millions of pores of the skin more or less closed by cold.

3. These remedies have the three recommendations of being easy to obtain, convenient to carry in traveling, and perfectly harmless.

4. They are nearly or quite uselese in the actual cure of long-continued chronic diseases of the throat, or acute inflammation or "tonsillitis," both of which require other appropriate treatment.—*New York Medical Record*, Jan. 1., 1873.

GOOD EFFECTS OF ACONITE IN ACUTE PNEUMONIA.—Among other cases of interest which came under the observation of Dr. Murchison, in the male wards of St. Thomas's Hospital, London, was that of a boy aged fifteen, who was admitted with acute pleuro-pneumonia of the right side, and herpes labialis, and considerable increase of temperature. On the administration of eight minim doses of tincture of aconite, with liquor ammoniæ acetatis every four hours, the temperature at once came down, and the disease did not increase.—*British Medical Journal*.

CORRESPONDENCE.

THE CINCINNATI HOSPITAL.

PROF. THACKER;—This institution, which was built at a cost to the tax payers of Cincinnati of more than a million of dollars, and requires for its support an annual expenditure of near a hundred thousand more, will, to all appearance, be abandoned by the state legislature to the mercy of political parties and medical factions.

For forty years prior to 1861, the Medical College of Ohio had by law the control of this hospital. At that time the rulings of the college faculty became an unbearable nuisance to other medical colleges, and to the profession generally, and the legislature very wisely

separated the hospital from the college, placing the former under the control of a board of trustees in no way related to the college. Under the law of 1861 the hospital is now controlled and managed. In 1869, the legislature passed a municipal code for cities of the first-class, and in it made provision for the creation and government of hospitals, but in 1870 a bill was passed excepting the Cincinnati Hospital from this code.

About a year since an attorney for the Medical College of Ohio commenced a suit in the courts to have the law of 1861 declared unconstitutional on a technical defect. This suit is yet pending. The trustees of the hospital are also in court on a writ of quowarranto. It is claimed that the law of 1869 legislated the trustees out of office, and that the law of 1870 could not restore them to place. Now assuming this to be true, and the law of 1861 technically unconstitutional, then there is no law governing this institution except that which authorized its creation in 1821.

These facts have been presented to the legislature at its present session and an appeal made for a law that will save the hospital from these disputations in the courts and from becoming a prey to political intrigues and medical factions. A bill was sent to Columbus, but it was drafted in the interest of a particular party, and probably would be worthless if passed. Soon after it was presented to the senate there appeared in the State Capitol the restless spirits, the Murphys, the Bartholows, and the Grahams, whose policy has ever been to ruin that which they could not rule. After a lengthy quarrel before the Senate committee having the bill in charge, during which time Murphy gave himself up to his usual maniacal raving about the exclusion of professors in medical colleges from the hospital staff, Bartholow to his vindictive denunciation of the whole management of the hospital, characterizing it as a disgrace to the profession of Cincinnati, and Graham to slanderous assertions about the qualifications of the staff, declaring it to be made up of second and other inferior rate physicians, the committee commenced amending the bill to suit these bloated egotists. They erased a part of one section here and added another there until the bill was without soul or substance. These amendments were designed to force the faculty of the Miami Medical College into the Cincinnati Hospital Staff, and to keep the sick marines in the old Lock Street Hospital, a small private concern in the eastern part of the city. In this institution the faculty of the Medical College of Ohio commit the ludicrous blunder of attempting to teach clinical medicine and surgery.

The bill as amended is not only devoid of justice but contains abundant elements for strife. It appears to have two objects in view. First, to correct the defect in the law of 1861, and second, to prevent the board of trustees now managing from ejection by order of the Court. The concluding part of the second section reads "provided, however, that no appointment shall be made under this act until vacancies shall occur in the said offices under laws now in force." We will assume that this bill having passed the legislature is the law of the land for the purposes therein declared. Now suppose the Court shall decide the "laws now in force" unconstitutional, and the trustees should attempt to hold their places by virtue of this proviso. Would not the legislature be placed in the awkward position of creating an office and then attempting to fill it. Could an-

other writ of quowarranto be avoided, and could other legal proceedings be prevented? This concluding part of section second seems to attempt the folly of whitewashing the house to repair a defect in the foundation.

We might mention other objections which crop out from the different sections; indeed the whole bill as amended bristles with elements for strife, but we have not the time or the space to notice them. It is evident that no good can come from the passage of this bill as amended, and passed by the senate, either to the Hospital or to the Medical Colleges.

The house committee are perplexed and disgusted with the controversy, and not knowing what to do are disposed to do nothing but wait for additional information, and in the mean time let the Hospital take care of itself, or, what is more probable, let the courts dispute about it, and the doctors quarrel over it.

Why is it that this magnificent and complete structure, this noble offering of Cincinnati to her unfortunate sick, is to be left for the next year to the mercy of warring elements? Can nothing be done to save its government from drifting into anarchy, and its halls from becoming the scenes of disgraceful feuds and quarrels? We are constrained to say that the fault is not with the committee, but with the members in both branches of the legislature from Hamilton County. We are pained to say that a majority of the members in this delegation fail to rise as legislators above social attachments, and legislate in the interests of justice and for the good of the whole people. Each one seems to have a personal friend for the promotion of whose interests he is bound to legislate. Each member of the delegation has his physician, and each physician belongs to some medical faction or party. Each consults with his personal friend while he avoids all others. Dr. Murphy has been active in securing the election of one, Dr. Bartholow is the physician of another, and Dr. Graham drinks cock tails with yet another, therefore the private interests of these gentlemen must be respected in all matters of legislation seems to be the principle on which too many members from Hamilton County act. For fear of offending some friends who may chance belong to an appearing medical faction or combination they agree upon nothing, they suggest nothing, and it is probable that nothing will be done.

Late as it is in the session there is yet time to do for the Cincinnati Hospital all that is necessary. Let the Hamilton County delegation in both houses forget their personal friends, and take hold of this subject, looking only to justice and efficiency. Let them consider the varied interests centered in the Hospital, and there will be no difficulty in comprehending its wants and providing the needed legislation. The committee having the subject in charge are willing, and we have many assurances that any bill agreed upon in relation to the hospital by this delegation will not only receive the recommendation of the committee, but will be promptly passed by the legislature.

The Cincinnati Hospital building is constructed for two purposes, first, to take care of the sick, and second, to aid learners in their studies while preparing for the practice of medicine and surgery. The tax payers of the city are interested in both of these purposes. While it is their will that the unfortunate and the sick shall be properly cared for, it is to their interest that the educational feature of the Hospital should be fostered by such means as will make it at-

tractive to medical students. Every one thousand students will not only pay five thousand dollars into the Hospital, but will add to the traffic of the city from three to five hundred thousand more.

It is therefore the duty of the law-making power in the State, and especially is it the imperative duty of that portion of it from Hamilton County which assumes to represent the tax payers of Cincinnati, to see that every needed provision shall be made to bring medical teaching to the highest possible degree of prosperity. This cannot be done without affording equal opportunities to all the medical colleges for clinical teaching in the Hospital, and this equality should be fixed by the legislature, and not left to the discretion of the Board of Trustees who have even more personal friends in the medical profession than the Hamilton County delegation in the legislature can claim.

We have in Cincinnati near two hundred physicians, about fifty of whom desire to take part in medical teaching. The three colleges absorb about one-half of this number. We refer now only to the so-called regular medical colleges. The Hospital Staff requires about fifteen more. These must be selected from the college faculties, or from members of the profession not connected with the colleges, or from both of these sources. The law might require that an equal number of physicians should be taken from each one of the college faculties, and the remainder be taken from members of the profession outside of the colleges. But many of the tax payers are supporters of the so-called irregular practice, and the gentlemen engaged in teaching it would justly claim that they had a right to teach their peculiar medical notions in a Hospital created and supported as is the Cincinnati Hospital. Here would be trouble. It has been claimed that colleges should not be recognized on the Staff of the Hospital, but members of college faculties should be selected on account of eminent fitness, and not because they were members of such faculty. But this is impossible without doing injustice to those colleges which have no representative from their faculty on the staff. The idea is erroneous, and any one who will study the subject for five minutes, and fail to see it is too verdant to be safe with herbivorous animals. It has also been said that outside of the college faculties a competent staff could not be selected from the profession in Cincinnati. To contradict this false and absurd statement we have only to point to the present efficient staff. It is therefore apparent that it will be greatly to the advantage of the Hospital, and to the medical colleges of the city, to exclude by law all medical college faculties from the Hospital Staff. Such a law will give position to a greater number of competent medical gentlemen who desire to teach medicine. It will avoid all difficulty with the irregular practice. It will define a policy that will soon be accepted by all the colleges, and adhered to in good faith. It will add greatly to the efficiency of medical teaching by dividing the labor, giving to the gentlemen in the colleges didactic medicine, and to those in the hospital clinical medicine. It will place all the colleges on an equality, and above all it will continue the peace that has prevailed there for the last two years.

Let the legislature before it adjourns repeal all laws on this subject, and then create by law a government for the Hospital, defining the duties of the Board of Trustees. This done the doctors will care but little about who are Trustees, and if college faculties are refused

admission to the Staff this subject will be no longer a bone of contention over which colleges can quarrel.

R. C. S. REED.

Jones Station, O., April 4, 1873.

Book Notices.

A RATIONAL TREATISE ON THE TRUNKAL MUSCLES, Elucidating the Mechanical cause of Chronic Spinal, Pelvic, Abdominal, and Thoracic Affections; and of bronchial and other derangements incident to the clerical, legal, and musical professions; with the rationale of their cure by mechanical support. By E. P. BANNING, M. D. Svo. Pp. 352.

The author has written this work from the conviction that uterine displacements, spinal affections, and certain other maladies, are but imperfectly treated, owing to the mechanical element of their nature not being clearly understood. He holds that the viscera are as much under the law of a primary and specific position and bearing as the bones, and that functional disturbances, requiring physical aid, may follow a violation of that law in one case as well as in the other.

The work forms a complete treatise upon Mechanical Pathology and Therapeutics; and is, in this respect, all that can be desired. Those who are better able to judge of its merits than we are, from having cultivated the field to which it is especially devoted, speak of it in the highest terms—pronouncing it “thoroughly scientific and practical.”

We find treated in the volume SPINAL SYMMETRY AND DEFORMITY—pathological indications, spinal tenderness and irritation, angular curvature, lateral curvature; UTERINE DISPLACEMENTS—their pathology, uterine retroversion, anteversion, lateral obliquity; MUSCULAR LAXITY OF THE INFERIOR EXTREMITIES—therapeutic indications; MUSCULAR LAXITY OF URINARY ORGANS—bladder, kidneys, ureters; ABDOMINAL AND SPINAL SUPPORT IN GESTATION—indications, comparative advantages of mechanical support, mechanical support in the puerperal state, abdominal and spinal shoulder-brace; HERNIA—its pathology, curative indications, inguinal, femoral, ventral; INSTRUCTIONS FOR FITTING BRACES. But we have mentioned sufficient to give our readers an idea of the scope of the work. Very many other subjects pertaining to mechanical pathology and therapeutics are treated of at length.

We wish the author success in the cultivation of the interesting field he has entered upon.

OPHTHALMIC CONTRIBUTIONS. By GEO. STROWBRIDGE, M. D., Lecturer on Diseases of the Eye and Ear in the University of Pennsylvania. Svo. Pp. 26. Philadelphia: Lindsay & Blakiston.

These contributions consist: 1st. Of a paper on “Dermoid Tumor of the Cornea,” reprinted from the *American Journal of the Medical Sciences*, January, 1873; 2nd. Of a paper on “An Additional Method for the Determination of Astigmatism,” reprinted from the *Transactions of the American Ophthalmological Society*, July, 1871, with an abstract from a paper on “Ophthalmometrical Measurements of the Cornea and Crystalline Lens; 3rd. Of a paper on “Cyst of the Iris Removed by Operation,” reprinted from the *Phil. Med. Times*, Feb. 5, 1873.

The pamphlet is illustrated by a number of well-executed engravings, and we have no doubt it will be found containing valuable information to ophthalmologists.

Editorial.

TO SUBSCRIBERS.—We regret to say that the receipts for the present year up to this time are not so large as last year during the same time. This is undoubtedly to be ascribed to carelessness on the part of subscribers in remitting. Come, friends, send us the trifling amount each one of you owe for 1873. Our expenses are heavy and have to be met promptly, therefore supply us with the means. We hope to have a hearty response by the issue of the next number.

CINCINNATI HOSPITAL.—This institution is again becoming the subject of agitation. The wise and just rule which was adopted some time ago by the Board of Trustees, that the members of the staff should not engage in college teaching, does not suit the uneasy spirits who desire to control the Hospital for their personal advantage; and they are now moving in the matter of having the regulation changed. We had hoped that the wars which have been waged so fiercely in times past had ceased to exist longer; but it seems that we were mistaken, and that the same old bitter fights are to be gone over again. But if it must be so let it come. We are ready as in times past to take a stand for the right. We prefer peace, but we cannot consent to peace at the sacrifice of right.

A bill has already passed the senate of the legislature, nullifying the rule of the Trustees, that college professors shall be ineligible to positions upon the staff. It has yet to pass the house before it becomes a law, and it is not improbable that it may not pass that body. Considerable opposition has been made to its passage, and up to the present time the house committee seem disposed to let the bill go by default.

Our only interest in the matter is that the Hospital may fully carry out its purposes as an eleemosynary and educational institution; and in order that this may be brought about, it is necessary that it should not be the subject of bitter contention among the colleges as it has been in times past. Either the colleges should have no representation at all upon its staff, as is the case at the present time under the rule of Trustees, or they should have an equal representation. In no other way can there be peace which is so necessary for the prosperity of the institution. The colleges *must* be on an equality as regards all of its advantages or a continual warfare will be the result. As our readers are aware it is for this we have always labored, and finally had the pleasure of having it brought about in the regulation of the Board of Trustees excluding all members of college faculties from the staff.

We have no objections to members of faculties being upon the staff; but, in that case, every college should be fairly represented. Some years ago the Ohio college faculty formed the staff to the exclusion of all others, and it was only after a bitter fight that they were ousted. But they were no sooner out than the Miamis by their trickery obtained an almost complete monopoly, which they employed to their advantage in a most unblushingly unprincipled manner. Now they are out after disclosing to what depths of meanness humanity will descend to to carry out its selfish purposes, shamelessly violating the professions put upon record in the past, and may they stay out in all time to come.

It is complained by those who are dissatisfied with the rule of the Trustees excluding professors of colleges from the staff that the hospital staff is composed of incompetent men—that all the *first class talent* being monopolized by the colleges, only that of a very inferior order is available for clinical teaching. Now we have the utmost confidence,

as a matter of course, in the ability of our college professors, but that there is no talent outside of the about thirty men that compose them we do not believe. We would regard it as a stigma upon the profession of Cincinnati, that in so large a city less than two score men could be found competent to teach medicine.

That the staff of the Hospital is not any more competent than it should be we very readily grant. But while we concede this, we cannot but believe that it is very far superior to what it was when monopolized by the Ohio and Miami faculties. Then we heard almost daily of terrible mistakes in diagnosis and of shocking treatment of cases. Now we seldom hear of anything of the kind. Certainly there are decided indications of more intelligence and more efficiency since the ejection of the Miamis and Ohios.

If the legislature will pass a bill that will place all the medical colleges on an equal footing as respects the Hospital, and will maintain them so, we will give it our cordial indorsement; but if they do not, we can assure them they will have the Hospital before them every session. Why not, then, do right at once, and let there be an end of the matter? The present bill is objectionable in that it affords an opportunity for the college that has the trickiest and most unprincipled faculty to soon gain the advantage over its rivals. If the Board of Trustees, the members of which are chosen by the Governor, judges of different courts, etc.—a mode of choosing that puts them beyond reach—can appoint on the staff such members of faculties as they see proper, it can with no great difficulty be brought to induce them to limit their selections to a particular faculty. It would be far better, if all appointments were left entirely discretionary with the Board, that the Trustees should be chosen by the Common Council for there it would be much easier to hold them responsible for their failure to act fairly. It has been not very long ago since the Hospital had a Board the members of which were entirely the creatures of the Miami faculty, and who made only such appointments as they were bid. These men owed their appointments by the judges of the various courts to the Miami ring, and of course they carried out their wishes. There was no opportunity, of course, for an aggrieved party to be heard; but before a Common Council composed of a large number of men directly responsible to the people there would be something like facilities for for being heard, and complaints could be lodged with them against the unjust action of Trustees. What folly is it to suppose that justice will be dealt out equally to all parties from a Board of Trustees whose members owe their appointment to the fact that a certain judge employs a certain professor as his family physician; that another drinks cocktails with another professor, and that some other judge attends horse races with still another.

But at present we do not propose to discuss the subject at length. For further particulars we refer our readers to the letter of our correspondent printed on another page.

We are indebted to the HON. HENRY L. CLINTON, of New York, for a copy of his printed argument in favor of the bill drafted by him in relation to the defense of insanity in criminal cases which has passed the legislature of New York.

MIXTURES OF ETHER AND CHLOROFORM.—About two years after the introduction of chloroform, a mixture of ether and chloroform began to be employed. We do not know who first introduced this compound. The proportions of ether and chloroform advocated at first were equal parts by measure, and the mixture was inhaled from a sponge or from

Snow's inhaler. From the outset, Snow, who during his life was properly accepted as the best experimentalist and practitioner in the department of anæsthesia, was opposed to the mixture of ether and chloroform. His opposition was based on very sensible reasons. Ether, he said, is about six times as volatile as chloroform—that is to say, if equal measure of each be placed in two evaporating dishes, kept side by side, at the same temperature, the ether evaporates in about one-sixth the time of the chloroform; and when the two liquids are mixed, although they then evaporate together, the ether is converted into vapor much more rapidly. In whatever proportions they are combined, he argued further, before the whole is evaporated, the last portion of the liquid is nearly all chloroform. The consequence of this, he continued, is that at the commencement of the inhalation the vapor inspired is chiefly ether, and towards the end nearly all is chloroform, the patient experiencing the stronger pungency of ether when it is most objectionable, and inhaling the more powerful vapor at the conclusion, when there is most need to continue cautiously.

It is worthy of observation, in parenthesis, that the above admonition given by Snow, in the same sense if not in the same words, twenty years ago, and repeated by him in the words we have quoted in 1858, has been independently restated by Mr. Spencer Wells in the present year. Speaking of the employment of the mixture of ether and chloroform in cases of ovarian operation, Mr. Wells says: "I tried a mixture of chloroform and ether in various proportions, but soon became aware that the patient was at first only affected by the lighter vapor of ether, and was then subjected to the action of the chloroform just as she was least able to bear it."

THE PLEA OF INSANITY.—In a recent lecture before the New York Medico Legal Society, DAVID DUDLEY FIELD, Esq., argued very forcibly that the rulings of the court in the McFarland case were absurd. The Recorder charged that not only must the prisoner know that he was committing an offense against the statute, but that he is morally guilty as well, in order to constitute a murder; in other words, again; "I think this is a good thing to kill RICHARDSON, therefore I'll do it." Judge SMITH had also taken the ground, and only two months ago Judge Brady, in the case of SCANNELL, charged that the prisoner must have been convinced of doing a moral wrong in order to have been guilty of murder.

MR. FIELD held that all these cases were justly punishable. Unless crime was deterred by penalties, there would be no check to its commission. Children and idiots, and those whose will was the slave of defective reason were not criminally responsible, but neither emotional nor perceptual insanity could excuse. The existence of brain disease must be shown. Where prisoners were declared insane they should be kept in lunatic asylums until restored to health. These opinions of an able lawyer are valuable and will have weight.

CHOLERA.—At the time of writing, cholera is existing in Vienna. Twenty cases have been reported as occurring in one day. The disease has continued steadily this last winter in Austria, Bohemia, Silesia, Hungary, and the neighboring countries.

From the outbreak of the epidemic in Hungary up to March 1st, 25,153 cases of cholera occurred in 1024 districts, with a population of 1,996,951; of these cases, 14,704 have recovered and 10,038 have died.

Several vessels with yellow fever on board have entered the port of New York. An English telegram reports a malignant outbreak of the disease among the foreign vessels at Rio Janeiro; many of the officers

and crews have fallen victims and numbers have been conveyed to the hospitals.

BARON JUSTUS LIEBIG --A dispatch from Munich announces the death, after a painful illness, of this most distinguished chemist.

Upon **BARON LIEBIG** many honors have been conferred in acknowledgment of his eminent services in the cause of science. By Louis II., Grand Duke of Hesse Darmstadt, he was made a baronet in 1845. Professorships have been offered him in England, at Heidelberg, at Vienna and other countries of learning, but until 1852 he remained at Giessen, when he accepted the chair of chemistry at Munich, where he has since remained. In 1860 he was appointed president of the Academy of Sciences of Munich, a position held by him at the time of his death.

He was born May 12th, 1803. In 1818 he was placed in a drug store at Heppenheim by his father. Here he remained but six months, and then entered the University of Bonn in 1819, from which he shortly departed to that of Erlangen.

THE POPULAR SCIENCE MONTHLY, for May, contains an illustrated paper on Wave Action in Nature: a contribution from Herbert Spencer on the Labor Question; a vindication of his speech at the Tyndall Banquet, by Parke Godwin; Hippopotamus Tooth Pulling, by Frank Buckland; Instinct in Insects, by George Pouchet. The Doctrine of Natural Selection, by Alfred R. Wallace; The Black Death in New England, by Hezekiah Butterworth, Esq.; The New Psychology, by Douglass A. Spalding; Ocean Cables, by Sir James Anderson; The Borers of the Sea, illustrated; On the Causes Which Operate to Create Scientific Men, by Francis Galton; The Sherman Astronomical Expedition, by Emma M. Converse; The Battle of Life Among Plants, by Maxwell T. Masters, M. D., F. R. S.; Euthanasia; Freezing of Plants and Animals, by Professor Fr. Mohr; Professor Tyndall's Deed of Trust; Sketch of Sir G. B. Airy (portrait). New York; D. Appleton & Co.

The Georgia Dental Convention met in Columbus last Tuesday. The attendance was large, and they sang as an opening ode that sublime hymn beginning:

Old Jonathan Gibbs he broke his tewth,
He broke his tewth, he broke his tewth.
Old Jonathan Gibbs he broke tis tewth,
A-eating plum pud-ing.

Great lumps of suet they stuck intew it.
They stuck intew it, they stuck intew it;
Great lumps of suet they stuck intew it,
And made him howl, by jing!

MICHIGAN UNIVERSITY MEDICAL JOURNAL.--We have received notice from the publishers of this very excellent journal that with the issue of the April number its publication will cease. The reason of this course is not given, but we presume it is due to the delinquency of subscribers and not to a lack of them. Before we had experience as a journalist, we could not have been made to believe that the moral turpitude existed in so many hundred physicians as it does that permits a medical journal to be sent month after month, and year after year, and not pay for it. It is not termed pocket-picking, but it is just as mean; and the man who does it would pick another one's pocket if it was not for fear of the law.

THE CINCINNATI MEDICAL NEWS.

VOL. II.

CINCINNATI, JUNE, 1873.

No. 6.

HECTIC FEVER: A SYMPTOM OF PULMONARY TUBERCULOSIS. Its Clinical History, Diagnosis, and Treatment.

By A. P. DUTCHER, M. D., Cleveland, Ohio.

I.—CLINICAL HISTORY OF HECTIC FEVER.

Hectic fever is a never failing symptom of pulmonary tuberculosis; few patients escape it altogether. It commonly steals upon the individual insidiously. He may at first in the morning feel chilly; in the afternoon too warm; in the evening, on till midnight, his hands and feet are dry and burning; after this he perspires until morning. As the pulmonary lesion progresses, the paroxysms of fever become more severe, and its different stages more pronounced. The most peculiar features of the fever, as it presents itself in this disease, are to be found in the state of the pulse and perspiration. The pulse is small, hard, tense, jerking and very frequent, from one hundred and twenty to one hundred and forty, and in the last stage of the disorder even more. The perspiration is usually out of all proportion to the other stages of the fever. It seems to have some important connection with the patient's sleep; it very seldom comes on while he is awake, but after sleeping, he awakes and finds that he is sweating. The perspiration is commonly most copious upon the chest and head; sometimes it is moderate, amounting to a slight and pleasant moisture of the skin; at others it is profuse, and he is perfectly drenched.

Such profuse perspiration usually belongs to the latter stage of the malady, and is very distressing to the patient, making him even dread to sleep. It also tends to a rapid exhaustion of

the vital powers, and indicates, when very copious, that the course of the disease will be of short duration; for it has been observed that the perspiration generally keeps pace with the febrile excitement, and this with the rapidity of the pulmonary lesion. It has also been observed that any temporary cause which will increase the fever will likewise increase the night sweats. Chills are not always present in hectic fever. Frequently they are wanting, and the patient may be ignorant of any exciting cause for his profuse perspiration at night.

When pulmonary tuberculosis has advanced to the stage of softening, suppuration extensive in the pulmonary tissues, and the blood loaded with putrid matter, the perspiration becomes very acid, and not unfrequently has a peculiar sour odor that often attracts the attention of the patient. Sometimes it is so pungent that it fills the room, rendering it alike unpleasant for the patient and his attendants. Dr. E. Smith says: "We have taken pains to prove that acid perspiration occurs in cleanly persons, and after daily washing of the whole body, and when using clean linen, and is therefore not the result of circumstances too commonly found in the working classes. Of 177 cases of phthisis, 56.4 per cent. had a constitutional tendency to acid perspiration; whilst of those who perspired much, 70.7 per cent. had sour perspiration, and of those who perspired less than usual, 54.2 per cent. had remarked the acidity of the excretion. Hence phthysical persons appear to be constitutionally predisposed to an acid state of the perspiration.*

During the febrile excitement the countenance of the patient almost always becomes animated, the eye brightens, and, in an individual of delicate complexion, the fine flush upon the cheek gives a new beauty to the features. After the night is past, and the sweating stage is over, the pale cheek and the languid expression point again more clearly to the internal ravages of the fatal malady. Sometimes there is in the last stage of the disease a circumscribed redness on one or both cheeks, and when it becomes permanent, it is regarded as the speedy harbinger of dissolution. The poet has truly said:

" But ah! the' flush upon my cheek
That showed like health's first bloom,
Was death's own color—he decked
His victim for the tomb."

* Smith on Consumption, page 63.

II.—HECTIC FEVER NOT ALWAYS A SYMPTOM OF PULMONARY TUBERCULOSIS.

Hectic fever, as a diagnosed symptom of pulmonary tuberculosis, must be taken with caution, for it is a frequent attendant upon other diseases, such as chronic bronchitis, pulmonary abscesses that result from pneumonia, empyemia, and, indeed, upon all inflammations of the abdomen and pelvis, attended with suppuration. Hectic fever is sometimes present in other disorders that do not terminate in suppuration. I have frequently met with it in cholesteræmia, uræmia, and anemia. Some authors maintain that it is occasionally idiopathic. We have never met with a case of this kind. We have always been able to find an adequate cause for its existence in some special pathological condition of the system.

Several years since I was invited to examine a case that had been pronounced idiopathic hectic by two respectable physicians. A careful investigation proved the case to be one of diabetes mellitus. Although the urine was but little augmented in quantity, yet the saccharine matter was abundant, indeed the urine was loaded with it, and his constitution was suffering to that degree that he had two paroxysms of hectic during the day. His sufferings were greatly mitigated by a diet composed almost exclusively of animal food, in connection with such therapeutical agents as the bromide of potassium, strychnia, nappleworth, quinia, iron, and opium. After some months pulmonary tuberculosis supervened and terminated his existence. This by the way is a common sequel of diabetes mellitus. Nearly one half of the cases of this disease, that have fallen under my notice, have terminated by acute miliary tuberculosis.

The most remarkable feature of phthisical hectic is the state of the patient's mind. This is seldom depressed; he is cheerful, and is fond of dwelling upon bright pictures of days to come, which hope can present to his imagination. Such indeed is the fact while the digestive system preserves, unimpaired, its comfortable sensations and elastic tone, a state of things most frequently the case where the pulmonary organs have borne the weight of attack, and some writers have gone so far as to regard it an important point in diagnosis. If the patient's mind is anxious, depressed and melancholy, they tell us it is a sure

indication that the malady is more in the digestive than the pulmonary organs.

I have no reason to question this, for it is in perfect accordance with my own observation. Indeed, I am not acquainted with any chronic disorder in which the hopefulness and buoyancy of the spirits are so remarkable as in pulmonary tuberculosis. In some cases there appears to be an unusual brilliancy of the mind and cheerfulness of the disposition. Thus we frequently see that the least improvement in the symptoms is at once hailed as a harbinger of returning health, while their aggravation is attempted to be reasoned away by many trivial circumstances, which are as baseless as the fabric of a dream.

It is often quite difficult to determine whether the trifling manner in which phthisical patients speak of their symptoms and condition is to be regarded as an effort to conceal a fatal truth or the result of real indifference to their state. I once attended a young physician who fell a victim to this disease. A brother of his had recently died with the complaint; and when I intimated to the family the nature of his malady, they were greatly alarmed for his safety, but the patient did not appear to be the least excited by his condition, and throughout the whole course of his decline appeared cheerful and happy; and frequently when I interrogated him in relation to his health, he was always better and would soon be well. A few days before he expired, I told him that he was laboring under a delusion, that his disorder would soon terminate his life. "Oh, no," said he, "dear doctor, I know I cannot recover, I knew it from the beginning; but for the sake of saving my friends an unnecessary alarm and anxiety, I have braved the storm of dissolving nature, and am prepared to die." And when his last hour came he closed his eyes upon the scenes of earth,

"Like one who wraps the drapery of his couch about him,
And lies down to pleasant dreams."

III.—CASES ILLUSTRATING PHTHISICAL HECTIC FROM OTHER DISEASES.

The hectic of pulmonary tuberculosis is not unfrequently mistaken for intermittent fever. This is common in sections of the country where the latter disorder prevails. This is owing to the circumstance, that when intermittent fever becomes chronic it is

so modified in its features as to resemble hectic fever. I have, on several occasions, met with cases of this kind, and at first their diagnosis is not always readily made out. I will present a case or two by way of illustration.

April 7, 1859. Called this morning to see Mr. A., aged twenty nine; just returned from Fort Wayne, Indiana, where he has resided for the past year. He has always enjoyed good health until four months since, when he had a severe attack of chills and fever. He had but two paroxysms, when it was checked with quinia. In twenty-one days from the last paroxysm he had a relapse. This time it was not so severe; the chills, fever, and sweating were much lighter. Quinia was again prescribed, but did not, as on the former occasion, entirely relieve the disorder. The chills and fever were very erratic; some days he would have fever and sweating without chills; then again he would have severe rigors, with little fever and no sweating. Sometimes he would have a paroxysm for several days in succession; then they would cease for a day or two and return as before.

From the commencement of his illness his appetite has been uniformly good; has rested well at night; and has attended to his business when not suffering with the chills and fever. He now has a slight cough, and mucous expectoration. Pulse in the sitting posture ninety-five per minute; respiration twenty-five; tongue clean, but very red, particularly at the edges; Thompson's gingival margin very clearly defined upon the gums of the lower jaw; bowels regular; urine high colored and scanty; mind cheerful. For three days the chills have come on quite early in the morning, and by one o'clock the entire paroxysm is completed, and the afternoon and night have been comfortably passed. During the cold stage he complains of weight and heaviness in the chest, with a slight increase of the cough and expectoration.

On examination of his chest, the following physical signs were elicited. The expansion of the two sides were equal; on percussion, little or no dullness was discovered on either side; on auscultation, the prolonged expiratory murmur was distinctly elicited, immediately under the right clavicle; the respiratory sounds on the left side were normal; the heart sounds were louder than common; the bellows sound was very pronounced; and the impulse of the heart extended far beyond its normal bounds.

From the absence of enlargement of the liver and any serious pulmonary lesions, we were almost ready to conclude that our patient was suffering from valvular disease of the heart, complicated with intermittent fever. But the presence of Thompson's gingival margin, the prolongation of the expiratory murmur just under the clavicle of the right side, the erratic character of the fever, and the rapidity of the pulse between the paroxysms, lead to a different conclusion. The case was set down as one of commencing tuberculosis, and treated accordingly. During the summer there was temporary improvement in his symptoms, and we fondly hoped that he would be relieved of his disease.

About the first of October, however, he commenced to decline, and more grave symptoms supervened. Hæmoptysis, purulent expectoration, copious night sweats, diarrhea, and occasional attacks of pleuritis terminated his life on the 19th of January, 1860.

Post mortem, twenty-four hours after death, revealed the condition of the lungs and their surroundings. Several broad, long and thickened adhesions existed at the apex of the right lungs, with considerable serum in the pleura. The superior lobe of the lung was quite indurated, having several small vomica at the summit, all communicating with bronchia. The most of them were not larger than a pea, while only three of them were not as large as a common sized marble. None of their parietes were lined by false membrane, but were formed of a semi-opaque substance, of a yellowish aspect, quite firm and tenacious. In the middle lobe quite a number of tubercular deposits were found, in various stages of softening, but no excavations. The inferior lobe was congested, but presented no tubercular deposits. The left lung was but little affected. The bronchial mucous membrane was very much congested, and ulceration was found in several places on the right side. The heart was somewhat larger than natural, but in appearance normal. The semi-lunar valves of the aorta were slightly thickened, but in other respects healthy. The liver was fatty; the spleen slightly enlarged, the mucous membrane of the intestines congested, and in patches very much softened. The kidneys were small but healthy.

In reflecting over this case, it is evident that the patient in the first instance had ague. This we conclude from his residing in

a place where the disease is common, and from the paroxysms being promptly checked by quinia. The attack that supervened three weeks afterward was more than ague. The erratic character of the paroxysms, and their not being relieved by the free use of quinia, was sufficient proof of this. The malarial poisoning probably had some influence in developing the hectic fever thus early in the disease, and giving it such prominence that it constituted the chief feature of the subsequent pulmonary mutations. It was present at the commencement and continued with unabated severity until the last. It is true, during his temporary improvement, there was a brief respite from its annoyance, but when he relapsed, it became more distressing than ever, especially the night sweats, which at times were so copious that his garments had to be changed two or three times during the night.

At first the sweating was mostly in the afternoon, directly after the fever. At this early period the disease might have been mistaken for intermittent fever alone, for there was but one physical sign that pointed out the existence of pulmonary tuberculosis. The presence of Thompson's gingival margin furnished grounds for a reasonable inference that the patient was suffering under the pre-tubercular stage of the disease—a special dyscrasia—that would eventually work out its fearful mutations in the lungs, sap the fountain of life, and consign the patient to a premature grave:

The next case I would introduce is that of Ann B. I was called to see her in the fall of 1858. Her parents had died with pulmonary tuberculosis, and at an early age she was left to the care of a maiden aunt, who had watched over her with more than a mother's solicitude. She was a delicate child, and every thing that a scientific physician could suggest to strengthen the vital force and overcome the proclivity to phthisis was scrupulously enforced, and, at the age of sixteen, she had the appearance of a healthy girl.

About this time she was sent to one of our fashionable female seminaries. Being anxious to improve her mental powers and keep up with her class, she applied herself diligently to her studies. Overtaxing her brain, taking little exercise, living on scanty diet, and imitating some of her school mates in the barbarous habit of tight lacing, she soon laid the foundation of

ill health, and the subsequent development of pulmonary tuberculosis.

Some eight weeks previous to my first visit, she commenced to have chills in the morning, fever and sweating in the afternoon; pain in the back and limbs; loss of appetite; cough and expectoration, particularly in the morning. By degrees the chills and fever became so severe that she was obliged to relinquish her studies and call in a physician. After a hasty examination, he pronounced her disease intermittient fever; said she would be well in a few days, and prescribed the following:

R	Sulph. Quinia,	gr. xxx.	
	Ext. Cinchonia,	ʒi.	M.

Ft. in pill No. xx. Sig: one pill every 4 hours.

These pills were continued for six days without any improvement, when the following was substituted:

R	Sulph. Quinia,	gr. xxx.	
	Acid Sulph. dilut,	gtt. xxxv.	
	Sp. Vin. Gallic,	f ʒiii.	M.

Sig: A teaspoonful every 4 hours.

While using this prescription the paroxysms of fever were in a measure relieved, and she was enabled to resume her studies in part, but still they never entirely left her, although she was under the influence of anti-periodic medicine all the time, the doctor maintaining that her disease was nothing but ague. After struggling along in this way for several weeks, she was compelled to relinquish her studies and return to the residence of her aunt.

My first visit was early in the morning. She had passed a very restless night. In the lying posture her pulse was one hundred and five per minute; respiration twenty-five; tongue clean; Thompson's gingival margin clearly defined upon the gums; appetite poor and bowels relaxed. Complains of dyspnoea when the chills and fever are on, and for the last two weeks has had copious night sweats. Cough and expectoration not troublesome.

The physical signs were pronounced. The two sides were quite unequal in their expansion movements, the left being deficient in motion. Percussion yielded dullness over one third of the left side from the summit of the lung downward. Humid crackling

was distinctly heard just under the clavicle. On the right side the resonance was normal; the only abnormal sounds heard on auscultation were prolonged expiratory murmur and slight mucous ronchus.

The diagnosis was clear; tubercular induration and softening in the superiour lobe of the left lung, and semifluid tubercular matter in the right. The prognosis was unfavorable. I consented to attend her with the understanding that her disease would prove fatal. This is a sad office, but one from which the physician should never shrink. There is a chastened and holy pleasure in administering to the wants of one who is standing as it were upon the verge of the better land. The silent chamber where the messenger of dissolution waits for his expiring prey, is often the gateway to eternal life. And Oh, how often have I as I have felt the last throb of the pulse, heard the last breath, and seen the last flash of the eye, as the soul escaped from its earthly tenement, been reminded of those beautiful lines of Barbauld:

“How blest the righteous when he dies!
When sinks a weary soul to rest,
How mildly beams the closing eyes!
How gently heaves the expiring breast.

“So fades a summer cloud away;
So sinks the gale when storms are o’er;
So gently shuts the eye of day;
So dies a wave along the shore.

“A holy quiet reigns around,
A calm which life nor death destroys;
And nought disturbs that peace profound
Which his unfettered soul enjoys.”

The reader must pardon this seeming rhapsody; such thoughts are so intimately connected with this disease, it is difficult to escape them, and the physician who has not been inspired by them must have a heart that does not beat in sympathy with his kind, a mind that cannot appreciate the sublimity and glory of the Christian’s faith and hope.

Our patient lived some three months from the commencement of our attendance; her chief suffering, until the last, was from hectic fever.

IV.—THE TREATMENT OF HECTIC FEVER.

In the treatment of this fever, as it occurs during the progress

of pulmonary tuberculosis, there are four indications to be filled: 1st. To relieve the morbid sensibility of the nervous system. 2nd. To subdue local irritations and congestions. 3d. To eliminate morbid products from the blood. 4th. To sustain the vital powers. To fill the first indication we have four invaluable medical agents. viz., opium, hydrocyanic acid, quinia and digitalis.

1st. OPIUM. This has been long used in the treatment of pulmonary tuberculosis for years—it is indispensable. Of late it is seldom prescribed in its crude form, especially in hectic fever, experience having taught physicians, that in many patients it is apt to disorder the stomach, impair the appetite, and increase general debility. Hence morphine and its salts are commonly prescribed in its place. The acetate of morphine will sometimes arrest the febrile paroxysms speedily. I have frequently seen it alone relieve patients who were having two paroxysms of fever in twenty hours. I remember one case where the patient was scarcely through with one paroxysm until he was attacked by another, where the eighth of a grain of this article, given every four hours, for three days, mitigated their severity and frequency so that he would not have a paroxysm for several days. When it was dropped they would return as usual. When the acetate or sulphate of morphine disagrees with the patient, try Spuibb's liquor opii compound. From what I have seen of its effect in my practice, it appears to possess rare powers to relieve morbid sensibility of the nervous system, prevent the frequency of the paroxysms, and produce quiet and refreshing sleep. It should not be administered in large doses at long intervals, but frequently, every three or four hours, in small doses, eight, twelve, or fifteen drops, so as to continue its steady anodyne action. Given in this manner it has no superior as a remedy for phthisical hectic.

2d. HYDROCYANIC ACID. This is a most valuable medical agent to overcome and control morbid nervous sensibility. Indeed, it is almost equal to opium in mitigating fever, reducing the frequency of the pulse, relieving troublesome dyspnœa, quieting harassing cough, and producing refreshing sleep. When the tubercular disease is complicated with bronchial catarrh, I know of no medical agent that acts with more promptness and efficacy than this, particularly when the cough is troublesome and the

expectoration profuse. Here is a prescription that I have found useful in cases of this kind:

R	Acid Hydrocyanic,	gtt. xx.	
	Morphia Acetate,	gr. ii.	
	Tinct. Sanguinaria,		
	Tinct. Digitalis,		
	Fluid Ext. Cubebs,	aa f 3ii.	
	Hoffman's Anodyne,	f 3ss.	
	Simple Syrup	f 3ii.	M.

Sig: A teaspoonful three or four times a day.

In administering hydrocyanic acid in hectic fever great care should be taken that it does not produce vertigo, nausea, vomiting and diarrhea. If it produces these effects it should be discontinued at once. When hectic occurs early in phthisis, hydrocyanic acid will sometimes check the night sweats, substituting for them an intense heat and dryness of the skin, which is about as annoying to the patient as the sweating. When it produces this effect it should be given in connection with some diaphoretic, such as solution ammonia, acetate or solution potassa citrate. The following will be found a useful formula:

R	Acid Hydrocyanic,	gtt. iv.	
	Liquor opium Comp. (Squibbs),	f 3i.	
	Solution Potassa Citrate,	f 3iii.	
	Syrup Lemon,	f 3i.	M.

Sig: A tablespoonful every four hours.

3rd. QUINIA has long occupied a place in our list of therapeutics for hectic fever, but it has not the same power over this disorder that it has over intermittent fever. In the latter it is a specific, in the former it is not. When given in the same way as in regular intermittent, it will sometimes check the paroxysms, but it cannot be depended upon for this purpose. It is true, that, when given in large doses, although it does not often entirely check the fever, yet it greatly modifies it. I recently had a phthisical patient under my care, who suffered severely from hectic. During the hot stage his temperature was 105 deg. Fahr. He was in the second stage of the disease, and had, from the beginning of his illness, been under homeopathic treatment. Fifteen grains of quinia administered morning and evening, for two days, lessened the severity of the cold stage, reduced the temperature to 101 deg. Fahr., and rendered the perspiration quite endurable. I have no faith in small doses of quinia for hectic fever. A grain given every three or four hours only

aggravates the disease. It must be given in quantities sufficient to render those nervous centers insensible through which the source of irritation operates in producing the paroxysms. Ten or fifteen grains taken at night will usually be sufficient. Some physicians object to the use of quinia in such large doses in pulmonary tuberculosis: they say it is apt to produce hæmoptysis and intensify congestion in the pulmonary tissues. We have never witnessed such effects attending its exhibition, and, so far as hæmoptysis is concerned, we believe it would have the contrary effect. Indeed, there are numerous cases recorded of obstinate hemorrhages from the lungs, bowels, and uterus being speedily cured by quinia. In some patients quinia produces disagreeable brain troubles, when given in much smaller doses than those just named. Such being its effects it should be immediately suspended.

4th. DIGITALIS. There are few articles in the *materia medica* that have been more extensively prescribed in the treatment of pulmonary tuberculosis than this. At one time it was considered almost a specific for the disease. But, like all our boasted therapeutics, it was soon discovered that it would not cure the disorder; it is one of our most useful remedies, but no specific. Physicians are not just agreed as to its physiological action upon the system, but experience will soon teach any one that it is a powerful neurotic, exerting some special sedative action upon the vagus nerve. When administered in small doses in this disease, it lessens the frequency of the pulse, allays nervous irritation, and diminishes night sweats. When the fever is very high, out of proportion with the other symptoms, and destructive metamorphosis is going on rapidly, digitalis and quinia should be prescribed together. German physicians are in the habit of giving for this purpose Heim's pills, the formula for which is:

℞	Pulv. Digitalis.	gr. xx.	
	Pulv. Rad. Ipecac, }		
	Pulv. Opii. }	aa gr. v.	M.

Ext. Helenii q. s. u. f. pil. No. xx. Sig: One pill three times a day.

Niemeyer says: "The addition of a scruple of quinia to the above prescription becomes all the more important; the more periodical the type assumed by the fever the more severe its evening exacerbations become, and the more pronounced the chills by which they are ushered in. I am so much in the habit

of using Heim's pills, with or without quinia, in consumption, when the fever proves refractory to other remedies heretofore mentioned, that it has become a very common practice at my clinic." *

In prescribing digitalis as a sedative in hectic fever, I generally prefer the powder, seldom giving it in larger doses than one grain three times a day, abstaining from its use as soon as the action of the heart becomes intermittent. In some patients it destroys the appetite, in others it produces vertigo, nausea, and vomiting, when it should be discontinued at once.

Hectic fever is often greatly intensified by intercurrent congestions and inflammations that require special treatment. And I know of no class of remedies that will subdue them better than counter-irritants. At the head of the list is emplastrum cantharides. In some cases it is indispensable. In acute miliary tuberculosis I have sometimes been astonished at the marked mitigation of the fever on the application of a considerable blister over the affected lung. Even in the last stage of the chronic form, when pain in the chest, fever and sweating are very annoying to the patient, it is a remedy of great value. Many patients prefer it to the milder counter-irritants, mustard, croton oil and ammoniated liniment.

Another great source of hectic fever is the presence of pyoid and other effete matter in the blood. To eliminate these is a matter of prime importance. No healthy involution or assimilation can take place while they remain in the circulating medium; they greatly add to the morbid irritability of the nervous system, and exhaust the patient's vital powers. The best blood eliminatives to fill the indications to be met in the disease are iodide of potassium, chlorate of potassa, hypo-sulphite of soda, nitric, muriatic, and sulphuric acid. Nitric acid in particular is a most valuable remedy for hectic fever; its chief virtue consists in its catalytic and eliminative action. Indeed, under some circumstances, it is a valuable restorative hæmatic. Muriatic acid is also a good remedy in this disease, and may be prescribed freely. When the chief object appears to be the arrest of the night sweats, the sulphuric acid is probably the best remedy; it may be used externally and internally. Ten or fifteen drops of the diluted acid in a wine-glass full of a strong

* Niemeyer's Practice of Medicine, vol. i. page 274.

infusion of sage, taken two or three times a day, with a sponge bath of the acid diluted (a teaspoonful to a pint of water) at night, will sometimes promptly arrest them.

But while we are dealing with the prominent symptoms of hectic fever, and managing them with our best therapeutics, we should not neglect the patient's vital powers; these are to be maintained at all hazards. The vegetable tonics, iron, cod-liver oil, and stimulants should be employed just as the necessities of each case demand them. In this way, by a careful and judicious use of the instrumentalities named above, we can control, mitigate, and sometimes cure phthisical hectic fever.

A FATAL CASE--WHAT CAUSED DEATH?

By R. P. DAVIS, Redkey, Indiana.

Was called December 30th, 1872, to see Mrs. M., æt 36, mother of four children, last birth twins, three years old. Found patient suffering from a sense of uneasiness and oppression in the chest, with severe fits of coughing and dyspnœa, which were very much aggravated by any exertion in way of conversation or locomotion.

Expectoration rather mucoid in character, with the exception of morning, when it was purulent and profuse. Redness of cheeks not circumscribed, more or less febrile excitement in the afternoon, and copious sweating in the morning.

Voice clear, appetite fair, bowels relaxed, some emaciation, but patient able to be up a portion of the time.

Suppressio-mensium of between three and four months duration, constant nausea, and occasional vomiting. Could detect fundus uteri between umbilicus and pubis, or concluded so at least. I found upon physical examination of the chest that percussion elicited dullness over apex of left lung, in fact, unusual diminution of sound in comparison with apex of right lung. Auscultation in region of left apex showed the inspiratory murmur to be very weak and rough, in fact, badly confused.

I learned from patient that her mother, and two or perhaps three of her family, had died of phthisis, which, with the history of her own case, and the condition in which I found her, caused me to conclude that she had phthisis, and was pregnant. To my

opinion in regard to the disease of the respiratory apparatus, the patient took no offense, but was almost indignant at the mention of pregnancy.

She being a very intelligent and experienced lady, her positive negation had its due weight, and while I persisted in the correctness of my diagnosis, I admitted, through regard for the feelings of my patient, that "to err was human," and that I might possibly be wrong in reference to her being pregnant.

My treatment consisted as much of hygienic measures as it did of medicinal agents. I had the room well ventilated, and ordered patient to take outdoor exercise whenever weather was dry and pleasant.

Plenty of suitable nutritious diet to support strength. Counter-irritation over diseased lung, with comp. syr. of morphia, etc., to relieve cough. Mineral acids for colliquative sweats, and such other remedies as would palliate the urgent symptoms as they arose.

Saw patient every six to eight days, seemed to be much improvement in the condition of the lungs, but the menstrual suppression still remained. The patient persisting in her opinion of "no pregnancy," and I as persistent in my opinion of its existence, having made a careful vaginal examination.

I advised consultation, but patient said possibly I was correct, and that time would develop the true condition of affairs.

Was called in haste to visit patient on March 30th, 1873. Found her in good spirits; circulation normal, lungs as free as usual. Informed me that she was having pains resembling labor pains, and that the membranes had ruptured some two hours since. I found upon examination a breech presentation, foetus sinking rapidly. Sacrum to left acetabulum, posterior part of thighs to right sacro-iliac junction, pains regular and expulsive in their character, and everything looking to a speedy and favorable termination of labor. The pains continued, and within two hours from the time I entered the lying-in room, a six months foetus was expelled. Just as soon as the child was born (it being dead) I took hold of the patient's wrist, found pulse full and regular; grasped the uterus through the abdominal parietes, and found a firm and apparently well contracted uterus. Was suspicious of hemorrhage, and at once took hold of the cord to see if the placenta was yet expelled from the cavity of

uterus, when the patient said, "take a pillow from under my head," which an attendant did, when I noticed that she threw her eyes up, gave two or three gasps, and expired without a struggle or motion of any kind.

I do not think it was to exceed two minutes from the time the child was born until life was extinct. She seemed to be in good spirits all the time, was not exhausted, no external hemorrhage, uterus contracted immediately after expulsion of child, and there were no premonitory signs of a fatal issue in the case whatever. It was to me a peculiar and sad case. I give this hasty and casual history of this case, and hope to get from the editor or some contributor a satisfactory reply as to the cause of death.

Was it from the admission of air into the circulation through the uterine sinuses, internal hemorrhage, some masked heart-disease which I had failed to discover, embolism, shock, syncope, or if none of the causes mentioned, what did cause so speedy, quiet, and very unexpected death? This case is very full of interest to me, as the occurrence of death under such circumstances to any physician will prove very distressing to him, and distracting to the patient's friends.

A CASE OF PAINLESS LABOR.

By DR. C. E. HITE, Thornville, Ohio.

While looking over my "case book" I ran across the following, and report it.

March 11, 1872, five A. M., was sent for by Mrs. B., who was expecting to be confined. On my arrival, found my patient quiet, having had no "show" or pain. On examining found no dilatation. Patient informed me she never had any pain in her labors, and is the mother of four children. I made light of her remark and told her to wait and see if no pains came. Remained until after breakfast and then came home, leaving word for her to send again if found necessary; after dinner the messenger came again, and I paid her another visit. Found the os dilating slowly and yet no pain. My business being quite pressing, I at 10 P. M. gave infusion of ergot, and in a short time she was delivered of a fine boy.

I questioned her very closely in regard to her former labors, and she said; "never did I experience anything simulating a pain until you gave me that medicine." I have had patients with but very little pain, but never when the woman did not know what labor pains were; and especially after bearing so many children. I wish the experience of others on the subject.

RUPTURED PERINEUM.

Operation--Inclined Elliptical Suture.

By ALEX. B. TADLOCK, A. M., M. D., President of the Knox County Section of the Medical Society of East Tennessee.

[Read before the Society March 28th, 1873.]

"Of all the accidents attending delivery there is none more common than partial, and none more rare than complete, laceration of the perineum."—*Swayne*. "It certainly is true that the accident is a reproach to surgery, many eminent surgeons *had abandoned* the hope of giving effectual relief"—*Barnes*. Mrs. C. æt. 25, from the state of Arkansas, placed herself in my care April 3rd, 1872, for operation and treatment for complete rupture of the perineum, and laceration of the rectum, occasioned by the birth of her first child, on the 17th of the previous November—a physician being her accoucheur. Constitutionally she was of a nervous temperament, slender in form, and possessed an unusually narrow pelvis in the antero-posterior diameter. The injury and malarial influences had conspired to greatly impair her health, so that she presented quite a cadaveric appearance, with a rapid and weak pulse. Had no control over bowel emissions, whether gaseous or fecal; menstrual flux had not made its appearance since the birth.

April 6th. Having previously instituted a thorough examination to make certain of the extent of the injury, and condition of the cervix uteri, with Doctors McIntosh and Baily present, I closed the wound by first revivifying the rectal and perineal cicatricial edges, and then coaptating the rectal fissure with three interrupted sutures, ligated on the inner side of the gut, two deep, and three superficial interrupted stitches, closing the perineal triangle. For the rectal and superficial I used surgeon's silk, for the deep, hempen cord. With the exception of a con-

siderable loss of blood from the hemorrhoidal vessels, nothing unpleasant attended either the operation or the administration of the chloroform. Her nervous and emaciated condition rendered it impossible to secure favorable quietude during after treatment, which consisted of opium to control the bowels, with quinine and other medicines to meet constitutional manifestations, and carbolized water washes. April 15th, stiches all removed, and on the 18th, bowels evacuated, aided by a saponaceous clyster.

Result.—Upper four-fifths of the fissure of the rectum successfully united, with, however, only a small frenum of perineal union at the posterior commissure of the vulva, thus leaving a large fistula or rather perineo-vaginal “cloaque.” But there were very apparent advantages gained, for the patient soon perceived that she could control the bowels so as to enhance greatly her comfort and safety in company. This was a very important advantage, for it enabled her to pass the interim necessary to establish better health for the second operation more patiently, and with much more satisfaction. She remained in East Tennessee during the summer visiting friends in the country, and attending Lee’s Springs, and returned on the 18th of September with health greatly improved, ready and anxious for the second operation.

September 19th. Present Drs. Baily, Jas. Rodgers and Moses. On account of the proximity of the parts, rendered so by the frenal union alluded to above, (the preservation of which was thought desirable,) paring and stitching were made much more difficult and tedious. Careful vivisection of the entire cloacal circumference being made, three ligatures, each composed of silver wire with a thread of silk, with the quill, were used for the deep sutures. Three superficial interrupted stiches of surgeon’s silk, and a band of adhesive plaster, three inches wide by eighteen long, applied across the nates, completed the operation, having had but very little hemorrhage. No untoward symptom, and but little suppuration followed, so that but little treatment was required save to confine the bowels, and keep the parts internally and externally washed with a weak solution of liquid chlorinat, the patient being much more manageable than previously. The stiches were removed on the 10th day, and bowels cleared on the 15th, by an enema and the administration of castor oil, union being complete and satisfactory. Oct. 1st discharged cured.

We regard the introduction of the anal or posterior perineal suture as the most important part of the operation, though paring should be done effectually with the utmost care and patience. For this stitch we use a needle quite long and very crooked so as to make the entire circuit beneath the tissues with one sweep, passing just over or through the rectal walls. In the case reported the needle was thought to have penetrated the hollow of the bowels and that without any unfavorable consequences. As a certain guide for the point of the needle we use the end of the index finger, considering it indispensable for properly locating the track of the suture, both as to direction, and depth beneath the tissues. Instead of the usual horizontal mode of passing the stitches, we are of the opinion that in taking this, the first stitch, it would be better to select positions posterior to the fundamental base of the wound, for the points of the ingress and egress of the needle, say just behind a line crossing centrally the anal orifice. The track of the suture, with its points thus located, forms an ellipse, the base of which being elevated and acting as a fulcrum, causes the depressed arms or extremities of the suture attached to the quills to draw forwards and upwards, just in the proper direction to restore the freed ends of the ruptured sphincter to their locus in propria. Thus with the *oblique elliptical suture* additional importance attaches to the quills, besides affording even pressure and firmer coaptation of the parts. The other deep stitches, the length of the perineum determining the number required, should be located parallel to the first, and, in clearing the interval or vaginal rent, should include a small marginal portion of the vaginal mucous membrane. The application of the quills is easy, but the degree of traction for coaptating the segments of the wound should be carefully scrutinized, lest it should be insufficient for plastic affinity, or too great for free capillary circulation. We regard the perfect exclusion of air essential to adhesion by first intention, and therefore would rather venture too many than risk too few superficial sutures.

As to the cause, prevention and cure of the injury in question, a review of its history shows the very antipodes of medical discrepancy. Even the hygiene of the gestating woman, preparatory for safe and easy delivery, entirely fails in anything like harmony of opinion. The theory of supporting the perineum

during the passage of the child's head has authority of high distinction pro and con. In cases where the danger of rupture is imminent; and the occurrence seemingly unavoidable, some propose diverting by incision the threatened centro-perineal to a latero-perineal laceration, the propriety of which we question. Then the levator and transverse muscles, or their tendons, would necessarily be divided, and consequently, instead of the symmetrical antagonism of two symmetrical parts which we would have to overcome in an operation for central lesion, in the lateral or superinduced rupture, we would have to contend with distorted parts, and the most discordant muscular contractions. Had nature adopted the lateral, we believe a diversion to a central would have been claimed as a crowning feat of surgery, and the accoucheur who failed to secure the diversion would, no doubt, have been condemned with unmitigated upbraiding.

Again we have the most contradictory statements as to the possibility of a successful union without surgical interference. In recent cases not involving the sphincter, Dr. Byford says "it will not be best to use sutures or other surgical measures;" but if the sphincter should be ruptured, he asserts that an operation would be indispensable to a cure. Thomas says it is "not at all likely to undergo a spontaneous cure," if the sphincter ani be involved. That those lesions which do not entirely sever the sphincter may heal, generally without surgical treatment, and generally, "none which converts the two passages into one will do so." Other eminent authors express the same views. And then we have cases reported by good authority of rupture, unmistakably involving the perineum, sphincter, and rectum cured spontaneously by approximating the knees and keeping the patient to a side position for a few days, with bowels confined. Such a case is reported in Braithwaite by Arthur Taylor of Kingsdale. These opinions have their practical and theoretical significance. Practical in that to the unfortunate woman, even situated in the country, distant from surgical aid, the possibility of an escape from weeks of a miserable existence, and the horror of a dreadful surgical operation, offers comforting hope in misfortune. Theoretical, because of its bearing upon the cruel practice of the "liberating incisions," advocated by Brown, Dieffenbach, and others, but justly condemned by Sims, Agnew, Barnes, and others; and this brings us

to a part of our subject which we have ventured to examine critically and independently, yet respectfully. Anatomically we have five muscles concerned in this most important operation—namely, the coccygeus, two transverse, levator, and sphincter, which are arranged so as to form a hopper-like base for the pelvis. Functionally the sphincter acts in the capacity of a janitor at the anal orifice, while the levator forms the body of the hopper, and has the other three situated in a tripod arrangement around and outside to strengthen, guide, and maintain it in a central and most economical relation when filled and sustaining a downward pressure. Now we maintain that the action of all these muscles, except the sphincter, taken altogether with their original and fixed extremities all higher, that their attachments tend to elevate and withdraw rather than depress and protrude the anal parts; nevertheless Dr. John Hilton, F. R. S., recommends their division to allow the pelvic viscera to recede into the pelvis for the effectual cure of prolapsus and lacerated perineum. This procedure, it seems to us, would only want a circular incision of the integument to complete the destruction of all support anatomically provided for the pelvic viscera, and, instead of the natural retractive force of the muscles, an artificial support in the way of a bandage would be the only alternative. Had the occurrence of prolapsus been coincident with paralysis of these muscles, Hilton possibly would have sought no other cause than the paralysis to account for the displacement. And as for the lesion in question, we think the presence of the levator muscle the greatest auxiliary to success in an operation, for its tendency is to hold up and retain both sphincter, skin, and soft parts in their most favorable and natural position for proximation and union.

We will next scrutinize the philosophy of dividing the sphincter. This muscle, we know, is controlled by two forces—the nervous-reflex, or involuntary, and the supplemental, or voluntary. The one being subject to the will, needs only the restraint of the judgment, and no surgical interference, and the other, fortunately, but gives warnings of conditions, such as the presence of fecal or gaseous matters, which can be previously provided for by thorough evacuation. Hence the normal tendency of this muscle is to relieve itself of tension, and maintain inertly one and the same degree of caliber, whose cir-

cumference would be the same if divided into fifty arcs, and yet by virtue of the supplemental force resident in the sphincter itself, aided by volitional efforts through other muscles, as the gluteal, femoral, respiratory, and abdominal, the anal orifice may be lessened to retain, or dilated to discharge rectal contents. Besides, the contractions of the other three (guiding) muscles, the coccygeal and two transverse, are synchronous with, and the result of extending forces applied at either or both their extremities, meaning resistance to the consequent tension, whether that tension be due to centripetal traction, caused by depression of the anal paries, as in expulsive efforts, or to centrifugal traction, the result of separating the thighs and buttocks, as is the case in the defecating position, or that of horseback-riding. Now is it reasonable to suppose that we have not, within the purview of our judgment and volition, sufficient control over the conditions out of which arise these muscular forces to not only maintain them in their most relaxed state, but to forcibly coaptate the parts by position, and mechanical appliances to the extremities, and hips without the "liberating incisions?" Have we not ample mechanical means for even more than restoring the parts to a coaptation favorable for union? We are not here considering those abnormal conditions of muscular contractions, such as tetanus, nor do we propose to make provisions for such anomalies, for if such should be the condition of the patient, the operation should be postponed.

Now if these dissections were simply useless and void of material injury, merely for the sake of dextrous manipulation and surgical display, they might be less objectionable, but if besides being useless they are injurious, for the sake of surgical skill and respect for our patient let them be avoided. Let us examine:—It will be remembered that contraction of the three guiding muscles in truth means lengthening of their fibres instead of shortening, for their action is simply the expression of a force to regulate or avoid extension and contraction or the effort to shorten and maintain the *vis inertiae*, is a response to the condition of actual extension, which may be entirely independent of any change in the sphincter, but dependent upon voluntary or involuntary mandates, as explained above. Thus it follows that if these be divided we lose a support which is so very essential that the authors and advocates of the liberating methods al¹

recommend a T bandage support,—I suppose as a substitute for the natural one destroyed. Strange it seems that we have no evil results recorded of these indiscriminate dissections around the coccyx, often cutting and wounding no doubt the periosteum, or of those barbarous gashes severing the soft parts latterally, or of those outlandish deeds of thrusting a bistoury into the rectum two inches, and cutting outwards and backwards between the ischii and end of the coccyx two inches deep, thus blindly dividing bloodvessels, nerves, and muscles. If it were not for the admonitions of modesty, such practice might do for the dissecting room in practicing on the cadaver, but the illustrious Sims, Emmet, and others of this country have practically and successfully introduced a different surgery for the living. Every woman in the land owes a debt of gratitude for the happy and opportune escape of her sex in such fearful distress and suffering afforded by this improvement, as well as in many others of our surgical art and theory of the nineteenth century. We then contend that we have in accommodating positions and mechanical means ample resources for all coaptating purposes, and for maintaining the integrity of that coaptation during the healing process, without resort to any of the “liberating incisions.” For the same reasons, without better evidence of the utility of and necessity for it, we would decline the late complicated method of cutting and skinning and patching, styled by the author the “modified operation,” for the cure of ruptured perineum.

As to the amount of tissue to be removed in freshening the surfaces, Erichsen says the “edges and sides of the rent must be freely and *deeply* pared;” Agnew, that “paring should not extend deeply, but should involve a portion of the labia and vaginal mucous membrane,” Lane and Duncan both recommend the removal of a long tape like piece of integument about half an inch in breadth. Individual preferences for the use of the knife or scissors no doubt depend upon this discrepancy of opinion, one being better adapted for shallow, the other for deep dissections. In the case reported we used the scissors, and wasted as little tissue as possible, making the most delicate tonsiles, believing that the sensitive and vascular character of the cuticle and tissue near the surface offered the best facilities for plastic union. Indeed, if it were not for this physiological character peculiar to the integument, we doubt the probability

of union by first intention. We think the cicatricial surface furnishes a better guide as to the extent of surface to be removed than any theoretical lineal admeasurement. It will differ in individual cases as much as the pelvic diameters and capacities differ. Nearly all agree in commencing at the posterior of the rent and cutting or trimming forwards towards the fourchette so as to the better avoid embarrassments from the blood. The natural length of the perineum, or rather the actual length of the lesion, should determine the number of stiches, both deep and superficial. We believe there is more danger in introducing too few than too many. For fastening the sutures Agnew prefers the shot; Barnes recommends Brook's beads; some the serres fines of Vidal; while Sims and Emmett declare in favor of the simple interrupted method. However, to meet the objects and aims of the antero-inclined elliptical stitch, as herein described, the quill suture is indispensable. All except Byford, I believe, introduce the first suture nearest the rectal mucous membrane. In the after treatment nearly all confine the bowels for the first ten or twelve days. Furgusson, however, kept them open with injections. Some surgeons prefer nutritious diet, others light and farinaceous. A few leave the catheter in situ; most all use it as required by nature's demands. Various applications are made to the parts. The time for the removal of the stitches varies from thirty-six hours to ten or twelve days, according to the views of writers. Early removals are rather the practice of latter days. Madden, of Dublin, usually removes them in from thirty-six to sixty-four hours. His success, however, does not appear the most encouraging.

Position we consider as of paramount importance in the after treatment, for we have an advantage in it without stitching, myotomy, or incisions, which will more than compensate for the separation and displacement of the parts, as is verified by examples of spontaneous union, and may be proven by a little experiment on ourselves to find the degree of available force for approximation. The true position indicated seems to be supination, with legs extended and crossed below the knees. Were it not for the difficulty of maintaining favorable quietude for so long a time immediately after the injury, with the woman in this position, aided by the adhesive straps above alluded to, we doubt

not the probability of a satisfactory union, without resort to any surgical procedure save to eliminate the urine and attend to the bowels. However, to favor the discharge of the lochia, which Trogher, of Vienna, and others think would seriously interfere with successful union immediately after the accident, and prevent its viciating effects on the plastic material, it might be better to waive the dorsal position, and take the semi-prone, with the legs crossed as before. *Assequi et sequi natural consilia conare.*

THE TRUE LAW OF POPULATION.

Based on Physiology and Psychology.

By DR. NATHAN ALLEN, of Lowell, Mass.

It may appear almost presumptuous to assume the phrase, "true law," which might seem to imply that all other theories were false or not true; but such is not our meaning. It is intended to express this sentiment, that whatever views are entertained on this subject, or however diverse they are, they must all, as far as true, be subservient to a great general law which has its origin and foundation in physiology.

More than thirty years ago, a work was published in London with this title, "The True Law of Population Shown to be Connected with the Food of the People." The merits of this work consisted very much in the evidences which physiology afforded in support of its theory, arising from the effects that food combined with other agencies had in changing physical organization. But, unfortunately, Mr. Doubleday, the author of this work, as well as some other writers upon population, have not been thoroughly educated in the principles of this science.

As this subject is so vast and complicated, a large volume would be required to discuss it properly, especially in expounding any new views; we can present here only a few points or heads of topics, by way of suggestion and illustration. An examination into the views and theories of most writers upon population shows that the laws which they lay down for its increase have been controlled generally by agents or objects entirely external to the body, and some of them hold only remote or indirect relations to it. Now, while these external agents, such as food, climate, exercise, etc., may operate as

powerful factors or as secondary causes, we maintain that there is a great general law of propagation which extends through the whole animal and vegetable kingdoms. Whatever influences these agencies may have in the development of the body, the most important agent or law of all, the law that shapes its life, character, and destiny, it would seem, must have its origin and seat somewhere in the body itself. What then is this Law? It may be defined thus:—*It consists in the perfectionism of structure and harmony of function;* or, in other words, that every organ of the body should be perfect in its structure, and that each should perform its legitimate functions in harmony with all others.

While this perfect physical organization is nowhere to be found in nature, we can readily conceive of such a standard, and that there may be all manner of approximations towards it. The nearer this standard is reached, the more completely the law of propagation can be carried out. This theory is supported by evidences deduced from physiology in a variety of ways.

All diseases interfere with the operation of this law, especially those that are considered hereditary. This class of diseases become intensified by each generation, and tend rapidly not only to impair the vitality, but to blot out the existence of the race. There is another class of diseases or weaknesses, described under “sterility,” “barrenness,” and “impotence,” from which strong evidences may be derived.

There is a general principle in physiology, favorable to this theory, which is thus described by Dr. Carpenter:—There is a certain antagonism between the nutritive and reproductive functions, the one being exercised at the expense of the other. The reproductive apparatus derives the materials of its operations through the nutritive system and its functions. If, therefore, it is in a state of excessive activity, it will necessarily draw off from the individual fabric some portion of aliment destined for its maintenance. It may be universally observed that when the nutritive functions are particularly active in supporting the individual, the reproductive system is undeveloped, and *vice versa*.” Let, therefore, any class of organs or any parts of the body be unduly or excessively exercised, and it requires the more nutrition to support them, thereby withdrawing what should go to

other organs. In accordance with this physiological law, if any class of organs become predominant in their development, if what may properly be denominated one of the temperaments becomes excessively developed, it conflicts with this great law of increase. In other words, if the organization is carried by successive generations to an extreme—that is, to a high nervous temperament—a predominance of the brain and nervous system; or, on the other hand, to a lymphatic temperament—a predominance of the mere animal nature, it operates unfavorably upon the increase of progeny. Accordingly in the highest states of refinement, culture, and civilization of a people, the tendency has always been to run out in offspring; while on the other hand all tribes or races sunk in the lowest stages of barbarism, controlled principally by their animal nature, do not abound in offspring, and, in the course of time, they tend also to run out.

The same general fact has been observed among all the abnormal classes, such as idiots, cretins, the insane, the deaf and dumb, and, to some extent, with extreme or abnormal organizations, such as are excessively corpulent, or spare, as well as of unnatural size, either very large, or diminutively small.

A similar fact has been observed among distinct classes, such as the nobility, aristocracy, etc., where by inheritance, refinement, and culture the nervous temperament becomes very predominant; it is found that such families in the course of a few generations do not increase in offspring, and, not unfrequently, in time, they become extinct.

A similar result has also followed the intermarriage of relations, from the fact, that the same weakness or pre-dispositions are intensified by this relation. Again, if we take those families and races which, for successive generations, have steadily increased most, we shall find that, as a whole, they possess a remarkably healthy, well-balanced organization. Illustrations of this type, we shall find, abound most among the middling or working classes of the German, the English, the Scotch, the Irish, and the Americans.

The laws of hereditary descent afford strong evidence in favor of some general law of propagation. The fact, that “like begets like,” subject to certain variations and conditions, is a proverb that has been too well attested to be called in question.

The union of two agents, possessing similar and dissimilar qualities, constitutes an important condition to which this law of propagation is subject. While it may be difficult to point out, in all cases, the exact results of hereditary influences, still it has been found on a large scale that, in the aggregate, there was the most unquestioned evidence of such agency, and that it was minute and extensive, and continued for successive generations. When this department of physiology becomes thoroughly understood, hereditary influences will more readily be traced back to their primary sources, and to the secondary causes operating to change and modify them. Now, the same evidence that proves the existence of hereditary agency, implies that there is somewhere a general law, of which this is part and parcel; and no one thing will throw so much light upon this whole subject of inheritance, as the recognition of a law of propagation, being based upon a perfect standard in nature. Again, there must exist in physiology a certain standard or type of organization for woman, best adapted for increase both for herself and her offspring. This, we believe, consists in a perfectly healthy and well-balanced body, that, with such an organization, the pregnant state harmonizes, the process of delivery is the safest, and the materials for nursing offspring are found most complete.

This theory of human increase derives evidence from an analogous law in the animal and vegetable kingdoms. It is well known that wonderful improvements have been made within the present century, in domestic animals, and this chiefly, too, by an application of physiological laws. To such an extent have the results of observation and experiment been here carried that this process of improvement has been reduced almost to a science. The terms here used, "Pure Blood," "Thorough-Bred," "Pedigree," "Breeding in-and-in," and "Cross-breeding," may all be explained by two great leading principles. One is a general law of propagation based upon a perfect standard, and the other is the law of inheritance subject to certain conditions.

In fact, these two laws constitute, we believe, the two great principles that underlie most of the theories of Charles Darwin; these are discussed under the head of "Natural Selection" and the "Law of Variability;" and whatever may be said against his theories of the "Origin of Species" and "Descent of Man,"

these two general principles are in our opinion founded in nature, and will survive all opposition and criticism.

A similar law of propagation exists in vegetable physiology. It is a fact well attested by gardeners, that in order to produce flowers and fruit, the soil must not be too rich or too poor; if the plant or tree grows too luxuriously, its branches or roots must be pruned; while on the other hand, if unthrifty, it must receive better culture and its roots be enriched before it will become fruitful. So the most beautiful flowers and richest fruit have few seeds, which in time run out, while that of a poor quality may abound in seed, but will not flourish long. It is true the conditions here vary, and so do the modes of perpetuating life; but, by analogy, facts and arguments of a positive character may be gleaned from this source to confirm a similar law in human physiology. Other facts and arguments might be adduced in favor of such a theory of population, did time and space permit, but we close with two or three suggestions. If this law of propagation is true, it presents a great standard for improvement, where there may be found the perfect free agency of man, and, at the same time, the highest motives for improvement. It could not have been intended by the Creator that man should always be ignorant of, or ignore, the great law of propagation, in many respects the most important in the universe; neither could it have been intended that man as a moral and accountable being should be a mere *passive agent* in the propagation of the species.

Again, this law of population should interest medical men, as it affords a new stand-point in physiology to study the relations of the body as a whole, and especially in their connection with the reproductive organs, which have constituted the chief study on this subject. It presents also, in some respects, a new guide to female organization as to what is the normal or best standard for the propagation of the species, and it may throw light on the changes occasioned by pregnancy, as well as on the qualities indispensable for good nursing. It explains in a clearer light than ever not only the laws of hereditary descent, but magnifies their value and importance in relation to human progress and welfare. It opens new views connected with anthropology, and aids in explaining many changes in the history of different races and nations. Inasmuch as it furnishes a new key to the study

of the body, and exalts physical laws in their connection with human improvement, it should certainly interest medical men. From more than thirty years of observation and experience in a busy professional life we have become every year convinced more and more of the truth and importance of the law here so briefly discussed, and would commend it to the attention of all enquirers after truth in this great field of observation and study.

HINTS ON EPILEPSY.

The *Medical Times and Gazette*, October 26, 1872, discusses, under this heading, the various theories concerning epilepsy and the remedies suggested for it. A bare enumeration of these theories, from the demoniacal possession of the old Greek and Arabian writers to the cerebral anæmia which is now advocated by Dr. Dickinson, would suffice for an extended article, and the same may be stated concerning the list of drugs and remedial measures advocated by different physicians, in accordance with some pet or fashionable theory, or as the outcome of their own experience. If anything is at all clear in this chaos of conflicting theories and opposing methods of medication, it is that what is called an epileptic fit, or an epileptiform convulsion, is nothing more than a symptom which we must refer to some ultimate common cause, or common condition of nervous matter, either of brain, spinal cord, or of sympathetic ganglia; yet a symptom which may be induced by a great variety of toxic agents, and apparently dissimilar pathological agencies.

Perhaps our earliest experience of convulsions is associated with imperfect æration of blood, as in half-born or newly-born infants, in whom the lungs are as yet but imperfectly expanded, or in whom there is some mechanical impediment to full and perfect respiration. A little reflection will show us that these are very closely allied to the convulsions which occur in whooping-cough, and sometimes in pneumonia, bronchitis, spasmodic asthma, and to those induced in suffocating animals by throttling, hanging, choking, etc. Closely allied are the convulsions met with in infants suffering from congenital cyanosis, whatever be the malformation upon which the mixture of venous and arterial blood depends. Not improperly we may class with these the convulsions which so commonly occur in those forms of heart disease—such as tricuspid regurgitation or dilatation of the right heart—in which the circulation of the blood in the lungs is especially hindered. With these, we may class many toxic agents which cause death either by spasm of the glottis, or by sooner or later impeding the free æration and

circulation of the blood, such are Prussic acid, chloroform, carbonic acid, and a host of others, together with opium and the numerous narcotics and sedatives which probably act in the same direction, although less obviously and more slowly. It would be rash, however, to build hastily upon this foundation the theory that the cause of epilepsy is to be referred to a want of oxygenation or, in other words, of aëration of the blood; for convulsions and epilepsy are met with in various conditions where this is very slightly or not at all interfered with.

We find convulsions caused by hæmorrhage; it may be from the funis in the infant, or in such cases as obstetricians and surgeons are familiar with in patients further advanced in life. In many of these cases there is no adequate clinical proof of a stasis of the pulmonary circulation, although there may be good reasons for believing in a deficient supply of blood—for the moment at least—to the brain. Shall we class with the latter cause the convulsions which are met with so frequently in dilated conditions of the heart's walls—such as are very common in patients with dilated left ventricle?

To return to our infant once more; we find him apt to be convulsed at the onset, in the course and at the end of almost all acute diseases, notably of the exanthemata. But a burn or scald, the eruption of a fresh tooth, the deposition or disintegration of a tubercular or syphilitic deposit, or the presence of some malignant or rapidly-growing tumor of his cerebrum, cerebellum, or adjacent parts, will excite him in an equally disagreeable manner. There is strong clinical evidence that the older writers were correct in assigning convulsions to the irritation produced by intestinal worms of various kinds. Adults are not exempt from the operation of similar causes. The various mineral poisons, as well as many vegetable ones, whose exact *modus operandi* is still unknown to us, are productive of epilepsy. Animal poisons, also, and (perhaps from the same cause) the effects of extreme heat, of extreme cold, of sections of nerves, and of obstructing or preventing the action of the skin, are equally well known as tending to produce convulsions of an epileptic type; so is the presence in the blood of urica, uric acid, of altered biliary acids, or other hepatic products, and even of the injection into the veins of the blood of another animal. The effects of some articles of diet, of mental emotion, and moral shock, of over-study or long-continued exertion of the mind, must be remembered. Sexual causes must properly be classed here, unless we consider these due to the anæmia so often induced, or as the result of reflex irritations or local congestions.

The list of exciting or apparent causes is by no means exhausted. Perhaps, for clinical purposes such a grouping as the following might be of use, even though many exciting causes would thus unavoidably be claimed by several of the groups.

We shall class convulsions and epileptic seizures, as to causation, in such a grouping as—First, due to direct toxic agents (animal, mineral and vegetable poisons, diseased conditions of blood—as met with in the exanthemata, syphilis, gout, and the like—including articles of diet or drinks when taken in excessive quantities, or when themselves impure or deleterious); Second, all causes of imperfect aëration of blood, whether heart or lung disease, or mechanical or other causes which impede or prevent the access of blood to the lungs, or the due oxygenation of blood in the tissues; Third, losses of blood or other fluids, causing direct general or local anæmia, and local congestions or local causes of irritation, whether acting as direct excitants of nervous and muscular action through or upon nerve centers (worms, teething and tumors, etc.); Fifth, other causes not classified (here mental and moral shocks, perhaps).

Can we classify the remedies, real or assumed, in a similar manner, or in any clinical relation to the above groups? We think we can. The remedies which fall under the first class, and which may be ranked as antidotes, are the following:—If the cause is malaria, quinine, barks of various kinds, arsenic, bromides and the like; and, in a minor degree, opium, mineral acids and many of the sulphates. If the poison is of gout or syphilis, colchicum, veratria, squill, digitalis, and the like for the former, and mercurials, iodide of potassium and its compounds for the latter. If lead or mercury is the cause, then the iodides, and perhaps the sulphates, and potassium-chlorate, with alkaline sulphides, and baths come to our aid.

It is extremely probable that most of the mineral tonics—silver nitrate, zinc salts and the like, as well as the ferruginous remedies which were for so many years fashionable for the relief or cure of epilepsy owed, or owe, their success to their properties as anticeptics or disinfectants by virtue of their powers of combining with albuminous matters, and of resisting decomposition; or perhaps, like quinine, to their property of limiting the amœboid movements of white blood-corpuscles, or of other animal cells or cellules. Once admit this, and our difficulty in reconciling the apparently opposite qualities of a host of drugs will vanish. Creasote and carbolic acid, ammonia, alcohol, ether and chloroform, will all claim to be ranked in this category.

Under the second class, come change of air, of diet and of occupation; remedies which relieve congestion—as purgatives and bleeding, diuretics and diaphoretics, and such as act upon the nerves of the heart or lungs—notably digitalis, hyoscyamus, the bromides, ether and chloroform; and such means as cod-liver oil, or phosphorus and its compounds.

In the third category, all the means of arresting hæmorrhage, and all the means of making fresh blood or improving the old—hæmatinics and the like—and even rest, are deservedly placed.

The forceps of the dentist, chlorodyne, oil of male fern, and other anthelminitics, sedatives, and whatever may either remove or soothe the local peripheral irritations which disturb the nervous centres, must be placed in the fourth class.

Our fifth class of causes of epilepsy, as it is vague and wide enough to include all the unknown causes, should also include all those wonderful and inert specifics which succeed only in the hands of their own inventors, the tractors of a Perkins, the marvels of mesmerism, hypnotism, and a hundred things as generally useful as cundurango, or uric acid of a boa, may rest in a happy, if not over-clean community.

BELLEVUE HOSPITAL.

Notes of Practice and Peculiarities of Treatment.

BURNS.

The remedies used in the treatment of this class of accidents are as numerous as the visiting surgeons and house surgeons are disposed to devise.

Common white paint kept continually spread on the surface, is a remedy quite commonly used.

Equal parts of Goulard's cerate and sweet oil is a remedy favorably known.

A very satisfactory remedy is Dr. Buck's burn-mixture. The following is the formula for its preparation:—

R.	Gum Tragacanth	3 ij.
	Gum Acacia . .	3 iv.
	Molasses,	
	Aqua	aa j.

Mix the gum and water, and let them remain until thoroughly dissolved, and then add the molasses.

This is spread over the surface with a brush, forming a continuous coating, and if removed by the process of suppuration, it is to be immediately re-applied.

Syr. Acaciae, with sufficient glycerine to make a liquid which can easily be spread, is sometimes used, and then covered with lycopodium.

SPRAINS.

The immovable apparatus is usually applied at once.

Immersing the limb in hot water, permitting it to remain for some time, and then applying a snug roller, is a most excellent method of treatment.

ERYSIPELAS.

A single case of erysipelas attacking an injured limb was treated by the immersion plan.

The limb was kept immersed in lukewarm water constantly for ten days, with exceedingly gratifying results.

Whether this methods of treatment will be retained or not can only be determined by further use.

CHRONIC SYNOVITIS OF THE WRIST-JOINT.

Dr. Burchard, one of the staff of the second Surgical Division has devised a simple apparatus for applying extension and counter-extension in these cases, which is very efficient, and productive of results satisfactory to the patient.

The indication is to entirely prevent the articular surfaces of the joint from coming in contact.

This indication is fulfilled by means of a wide palmar splint extending from the middle of the fore-arm to three or four inches beyond the fingers, narrowing as it passes beyond them.

At each corner of the upper end of the splint is a small slot. At the lower end of the splint is a round hole of a size proper to receive a violin key.

The splint is then padded in such a manner as to accommodate the irregularities of the limb.

Adhesive straps are now applied to the fore-arm, doubling upon themselves so as to form loops, passing from below upwards.

These loops are attached to the slots in the upper corners of the splint by means of tapes. This fastens the splint at its upper extremity. A broad band of adhesive plaster is next attached to the dorsum of the hand, passes a convenient distance below the fingers, doubles upon itself, and is attached to the palmar surface of the hand.

A small piece of board is then placed in the termination of this loop, in which a hole has been pierced for the reception of a piece of cat-gut, which is to pass out and become fastened to the violin-key.

The broad loop is then cut through in places corresponding to the interdigital spaces, and each finger-basket strapped, leaving the loop in its connection with the ends of the fingers intact.

The violin-key can now be turned, and any amount of extension made which may be desirable.

This apparatus is easily controlled by the patient, and the relief which it affords is sufficient guaranty that its application will be faithfully adhered to.

PNEUMONIA.

In my former note upon pneumonia I mentioned the plans of treatment which are adopted in this hospital. Since that time some cases have been treated by the quinine plan, 5 grs. three times a day, with excellent results.

There is one item in the management of patients who are the

subjects of pneumonia which is of practical value, and that is, to insure perfect rest and quietude in bed until the disease has completed its course.

Occasionally patients die very suddenly in the progress of the disease, apparently, at least, from a failure in the heart's action incident to over-exertion, even as moderate as that which may be induced by simply getting out to bed.

That patients sometimes die very suddenly in the course of pneumonia has been noticed for some time, but the *rationale* of the outward event has not been fully and satisfactorily given.

BRIGHT'S DISEASE.

It is believed that the occurrence of the severe nervous symptoms sometimes seen in connection with this disease, such as convulsions, can be warded off by the introduction of a proper plan of treatment.

The plan adopted is the diuretic plan, and consists in the administration of infusion of digitalis and bi-tartrate or acetate of potash.

These patients take half-ounce doses of the infusion three times a day, with varying doses of the acetate or bi-tartrate, and these remedies are continued for weeks or months in succession.

No hesitation is had with regard to these doses of digitalis, and in many cases very much larger quantities are given without any deleterious results being realized.

Not long since, however, a person died in the water-closet, and at the post-mortem nothing was found to satisfactorily explain his sudden death.

The heart was hypertrophied, weighing 3 xx, without valvular lesions, and coronary arteries normal. The kidneys were affected with chronic diffuse nephritis, which had gone on to the formation of a goodly number of cysts of variable size, from a filbert down. Brain, normal. Larynx, normal. Lungs, normal. Some old pleuritic adhesions.

This man had been taking infusion of digitalis in half-ounce doses three times a day, and in the absence of any pathological lesion which would explain the sudden death, the cause was a question to be considered.

Nine of the house staff seemed to be unwilling to believe that death was produced by the digitalis, for two reasons: First, it did not accord with the experience afforded by the treatment of similar cases with the same remedy, and in much larger doses; second, that the article furnished in the institution is so poor that almost any one could take such doses with impunity.

The question, however, is not altogether unimportant.

FROST-BITES.

A most interesting case has been in the hospital for some time, the interest involving the adjustment of a most important

surgical question. In this case spontaneous amputation of the terminal phalanges had already taken place.

Spontaneous amputation of the long phalanges had almost taken place, and the question arose as to which was the proper method of management; to have the amputation to go on spontaneously a little farther, then disjoint the bones and remove them, trusting to granulations; grafting, in short cicatricial tissue to cover the stump, or to amputate with the knife farther, back, so as to secure original skin structure for a flap to cover the stump.

The reason given for a knife amputation, and the formation of a flap from the original skin, was, that cicatricial tissue is always easily irritated when subjected to pressure, as it inevitably must be, more or less, in a stump; and hence would be the source of constant trouble to the patient in the future.

The case was left, however, to heal by granulation and cicatrization, and the soundness of the procedure can only be determined by future observation.—*Medical Record*.

SOME ATTEMPS AT HUMAN ANAPLASIA.

By Means of Mucous Grafts taken from the Cheeks and Tongues of Rabbits and Oxen.

By Dr. HOUZE DE L'AULNOIT, of Lille.

Translated from the French by MARY C. PUTNAM, M. D.

My intention in this note is to call the attention of the Academy to the results that I have obtained in transplanting on man pieces of mucous membrane taken from the buccal cavity of the rabbit and the ox. One of the principal inconveniences of the human dermo-epidermic graft, as it has been employed by Reverdin (*Gaz. Med. de Strasbourg*, 1870; *Archives Gen. de Med.*, 1872), Ollier (*Gaz. Hebd.*, No. 8, 1872), L. Le Fort (*Gaz. Hebd.*, No. 9, 1872), Broca (These de M. Bercaru), Gosselin (*ibid.*), Demarquay (*ibid.*), Pollock, Nelson, Rouge, and Bercaru (These, August 7, 1872, Paris), is to cause pain to the patients by submitting them to a slight operation, without danger it is true, but disagreeable enough to be refused by some, thus obliging the surgeon to take the grafts from his own person.

I had thought then since the month of November, 1871, of taking them from an animal, as had already been done by the advice of Bert (*These sur la Graffe, Animale*), Coze (Communication to the Institute, the 28th February, 1872), who cut cutaneous grafts from a rabbit, and Debreuill, from Guinea-pigs. But in order to approach the physiological conditions of the human

only be made up when *vised* by a physician, maintained that ergot might well be dispensed with in cases of hæmorrhage preceding or threatening abortion, as other means—bleeding, rest, opium—were equally successful. Nor was it of much use in hæmorrhage occurring when abortion had really taken place. It was then less valuable than refrigerants, plugging the vagina, etc. Again, hæmorrhage taking place in the more advanced periods of pregnancy is almost always due to placenta previa, and here again ergot proves of but little value. He scarcely appears to approve of it when used as an occitocic or hastener of uterine action, where this action is slow and feeble, and thinks it should even then be employed with great precaution and care. The only case where it was sometimes indispensable and could be administered without any danger, was in severe uterine hæmorrhage after delivery. Long experience had made him acquainted with many cases where the injudicious use of ergot had produced the death of the foetus or serious accidents to the mother, as rupture of the uterus, retained placenta, followed by purulent infection and death. M. Depaul corroborated M. Devilliers' statements, and stated that for the past twenty years he had been of opinion that midwives as a general rule should only be permitted to use ergot in cases of hæmorrhage after delivery from atony of the uterus. It might, however, he thought, occasionally and with proper precautions, be used by them advantageously in breech presentations. M. Jules Guérin considered that midwives should be better educated, and then the administration of ergot might safely be entrusted to their hands. He thought that ergot might often be advantageously employed in cases of atony of the uterus after delivery, and declared that M. Campbell, of Paris, was accustomed to prescribe ergot after every confinement to favor the retraction of the uterus. M. Poggiale remarked that it was considered by many that ergot was more dangerous in its results when improperly used than the forceps; but the law prevented *sage femmes* from using the forceps—much more, then, ought it to interdict the use of ergot. M. Blot only finds it useful in hæmorrhage after delivery. M. Tarnier, in summing up, gave the principal circumstances under which ergot might be used, and the Academy ultimately adopted certain regulations under which midwives might obtain ergot from pharmacutists, which procurement, it appears, was previously in contradiction to another French law prohibiting others besides medical men and veterinarians from writing prescriptions and having them made up.—*Bulletin de l'Académie de Médecine*, Dec. 17, 1873.

MEDICAL GLEANINGS.

TREATMENT OF COLLES'S FRACTURE.—Dr. Alexander Macdonald quotes various authorities to show that the seat of the fracture is

about an inch above the styloid process, and generally transverse; occasionally, however, presenting some degree of obliquity in its course either downward and inward or downward and outward. He then proceeds to point out that the radius presents a normal curvature anteriorly, that the direction of its carpal extremity is forward and inward, and that the difference in length between its anterior and posterior surfaces amounts on an average to half an inch. On the occurrence of the accident the following results appear: the natural concavity of the radius is lost; its distal extremity, with the carpus attached (in consequence of the unopposed action of the supinator and long extensors), is carried backward, outward and upward, while the length of the bone anteriorly is augmented in a ratio corresponding to the interval between the fragments, and the interosseous space is diminished by the approximation of the upper fragment toward the ulna by the pronator quadratus. The points to be attended to in the treatment are, first, to restore the form of the radius; second, to bring back its carpal extremity to its proper aspect *forward and inward*; and third (as a consequence of the preceding steps), to remove the obstacles to the reunion of the opposed surfaces, and, if possible, secure the normal length of the bone before and behind. How difficult of accomplishment this last point is may be inferred from Dr. R. W. Smith's testimony, that out of twenty cases of fracture of the lower end of the radius, in none had the normal length been restored: in all the anterior surface exceeded the posterior. Dr. Macdonald thinks that the several desiderata above mentioned have been met by the apparatus known as Gordon's splint, in which the normal curve of the bone is taken as a guide, and the radius thereby forced to assume its proper form and relations, while the carpal surface is directed downward, the hand being moderately adducted and midway between pronation and supination. Finally they are easy of application, and the feeling of comfort experienced from the support thereby afforded its marked when contrasted with any other form of splint in ordinary use.—*Am. Pract.*

RECOGNITION OF PHOSPHORUS POISONING.—M. Poulet stated before the French Academy of Science, that phosphorus is always eliminated in the urine, when taken internally in the form of hypo-phosphoric acid, and that taking advantage of this, the existence of phosphorus poisoning can be readily recognized or disproved. To discover hypo-phosphoric acid in the urine, nitric acid should be added to it, and the whole heated to calcination. If the acid be present, as dryness is reached, the mixture suddenly bursts into flame, like a packet of matches.—*Gazette, Medicale de Paris*, August 17, 1872.

ABORTIVE TREATMENT OF BOILS AND FELONS.—The following method of treating boils and felons is regarded by Dr. Simon

(*Gaz. Med.*) as almost infallible. Wherever the boil or felon may be, and of whatever size, so long as suppuration has not commenced, rub it gently with the finger wet with camphorated alcohol, pressing especially on its centre. This is to be done for half a minute at a time, and repeated seven or eight times. The part is then to be covered with camphorated olive-oil. If resolution is not brought about by one trial, it may be repeated at intervals of six hours. We have repeatedly used camphorated oil in threatened abscess of the mammary gland in females, and always with good effect; and are not surprised to learn that it has proved equally serviceable in the treatment of boils and felons.

McNANNEY ON THE TREATMENT OF FEVER BY CARBOLIC ACID.—Assistant-Surgeon McNanney (*Madras Medical Journal*, Jan. 1, 1873) warmly recommends the use of carbolic acid to replace quinine in the treatment of intermittent fevers. He gives a tabular view of his cases which he summarises thus:

“I administered it in seventy-six cases of fever of different types, with most marked success, and in no single instance with bad results; but, owing to the great amount of work consequent upon the epidemic, it was impossible to enter every case that occurred fully in the journal, although brief statements were made of each and the results corresponded with those now recorded. I gave it in doses ranging from five to twenty minims, and in those cases where I observed a tendency to relapse, I at once increased the dose. It was administered in bitter infusions of either gentian, calumba, or chiretta, three times a day.

“The carbolic acid I employed was Calvert’s No. 1 for internal use.

“Having now had ample opportunity of judging of the effects of this remedy, and finding its success to have exceed my expectations, I trust that the information I have given will be sufficient to induce others to adopt it in similar cases.

“I have little doubt that the ease with which it can be procured, and the small amount of trouble entailed in its administration, added to its trifling cost, and the immense saving to Government that would ensue from its being largely substituted for quinine, will recommend it as a valuable febrile remedy; and I do not think that a careful trial of it will fail to prove satisfactory.”

INJECTION OF AMMONIA IN CASES OF SNAKE-BITE OR COLLAPSE FROM INJURY.—Dr. Halford (*Australian Medical Journal*, Dec. 1872), describes six cases of snake-bite treated by the injection of liquor ammoniæ into the veins. In all cases, the symptoms of poisoning were well marked before the injection was made. Recovery took place in five cases; death occurred in one case, that of a child five years old. In one case ammonia was given

by the mouth at first, but was of little or no service, being almost immediately rejected by vomiting. Dr. Halford quotes a case recorded by Mr. Tibbits in the *Medical Times and Gazette* for Nov. 2, of a man in whom the injection of ammonia into the veins during collapse after railway injury, was of the most beneficial result. A large quantity of brandy had been previously given, but it was not absorbed during the stage of collapse, and was vomited after reaction had been induced by the ammonia. The intense pain and sloughing produced by liquor ammoniæ when injected under the skin are considered by Dr. Halford to form a most serious objection to its use in this way. Moreover, it does not act so rapidly or powerful as when introduced directly into the veins. The proper dose for direct injection into the vessels is 10 minims of the liquor ammoniæ fortissimus with 20 minims of water, for an adult. For children the dose must be reduced according to age, say 5 minims of liquor ammoniæ and 25 of water. The injections must be repeated as often as is necessary. The amount of water to be added to the ammonia may be left to the discretion of the surgeon; but, when no blood has been lost and the veins are full, little dilution is required.—T. LAUDER BRUNTON, M. D.

VARIOLA, VACCINE, AND POST-VACCINAL INOCULATION.—At a recent session of the French Association for the Advancement of Science, Dr. Papillaud, Saujon, read a paper "On Variola, Vaccine and Post-Vaccinal Inoculation." The author concludes, from various facts observed in practice, that vaccine, which exerts a sufficiently powerful preservative action in sporadic variola, becomes insufficient in epidemic variola. In the latter, revaccination affords neither complete nor certain preservation. Dr. Papillaud advocates variolic inoculation performed after inoculation with vaccine, and calls it therefore, post-vaccinal inoculations. He believes that it corroborates and achieves the prophylactic action of vaccine, and thus preserves completely from any attack of small-pox.—*London Lancet*.

POISON BY STRAMONIUM—Dr. A. W. Rogers was called to see a little girl, three years of age, in a state of wild delirium. It was with great difficulty that the mother could hold her on her lap. She would forcibly throw out her legs and stiffen them, and at the same time throw them wide apart from each other; the arms being constantly thrown out, as if trying to reach and get hold of something; and sometimes it seemed as if some object had been secured, and was for a moment fumbled in the fingers. The pupils were dilated, and the eye looked wild. The cry was a kind of scream; a little froth was seen in the mouth; the surface of the skin was hot; and the restlessness was very great.

Under the influence of an emetic she soon vomited matters containing the seeds of the stramonium, many plants of which

kinds are included. Now, we cannot afford to send our journal to parties and prepay postage unless we have some guarantee that the subscription price will be paid; and, therefore unless we hear from those who are in arrears between now and the issue of the next number, we will feel under the necessity of erasing their names from our subscription books. We feel confident that it is only the result of carelessness that any are in arrears, and that it is the intention to pay; but we cannot take any risks.

■ We have been sending the NEWS to a number of physicians whose addresses have been handed to us, hoping that they would become subscribers. If such desire to subscribe, they should notify us immediately, as no other number after the present will be sent unless a desire is expressed to have the journal continued.

CINCINNATI HOSPITAL.—We mentioned in our last issue that certain parties were desirous to get through the Ohio legislature a bill, which, if it had become a law, would have nullified the rule of the Trustees that made teachers in medical colleges ineligible to a position upon the staff. We are happy to announce the fact, that the bill, through the efforts of the MEDICAL NEWS, failed to pass the House, and consequently failed to become a law. It had passed the Senate before we were aware of what was on the tapis; but becoming advised of what the enemies of justice had in contemplation, the ventilation of their designs in the NEWS killed the bill by stopping it in the House. Fairness, consequently, in spite of the chagrin of particular persons, must continue in the management of the Hospital a few months longer at least.

CINCINNATI BOARD OF HEALTH.—Since our last issue, the Board of Health of Cincinnati has been reorganized by the retirement of several of the former members and the election of new ones in their places. We are happy to announce that to the new Board a physician has been elected, viz.: DR. THOMAS C. MINOR. As our readers are aware, we have labored for a long time that the Board might be constituted of more or less physicians, and it is a source of gratification that our wish to some extent has been brought about. It has taken a long time to get the profession of this city to realize how persistently they were ignored, to their discredit, in matters in which they are the only proper advisers; but finally it has been accomplished, and a professional gentleman has been made one of the seven members.

Dr. Minor is a young gentleman of ability, and we have no doubt but that he will make a most efficient member of the Board of Health. With the quite extensive powers which the Board possesses, there will be a wide range of usefulness, and we believe he will improve his opportunities.

Since the reorganization of the Board, DR. J. J. QUINN has been appointed Health Officer. So far as we can learn the appointment meets with the approval of the profession. Dr. Quinn possesses good perceptive powers and a logical mind, and will undoubtedly fill the position in a most satisfactory manner.

We hope the medical profession, for a year at least, or while the present Board continues, will have more respect extended it than it has received from that body in times past. None of its recommendations have, at any time, received any attention; and its advice at all times has been treated as impudent. The district physicians have been limited in the articles of the materia medica allowed them to prescribe, and in various other ways have been treated with indignity. We look

for improvement, and we believe that through Drs. Minor and Quinn we will have it,

PROFESSIONAL UNPLEASANTNESS.—A few weeks ago, Dr. B. F. Miller, of the staff of the Cincinnati Hospital, performed gastrotomy upon a colored woman for a fibroid tumor of the uterus, removing a greater part of the organ. Unfortunately, the patient, soon after the operation, died. Dr. Thos. Wood, and other gentlemen of the staff, we understand, fully assented to the justifiableness of the operation; but some invidious gentlemen of the Ohio College, desiring to ridicule the operation and bring into contempt the operator, had inserted into a number of the *Clinic*, of May, the following "sling:"

"A BOLD OPERATION.—At the Cincinnati Hospital, week before last, gastrotomy was performed on a woman, and the uterus, ovaries, and all adnexa were removed on account of a uterine fibroid. The whole mass—uterus, tumor, ovaries, ligaments, etc.—when removed, weighed only one pound and thirteen ounces. We understand that the rectum and bladder were not included. The patient, a poor colored woman, died in fifty-three hours."

The malice contained in this account of the operation is so evident that it can be detected at a glance. The object evidently was to injure the operator, and bring into disrepute the hospital staff, which the faculty of the Ohio College is specially, at this time, using all their efforts to malign. If one of their own number had operated, notwithstanding the fatal result, a report of the operation would undoubtedly have appeared in the *Clinic*, introduced by the sensational headings after the manner of that sheet.

Indignant at the effort to ridicule and injure him, Dr. Miller waited upon the ostensible editor of the *Clinic*, Dr. James T. Whittaker, immediately after the adjournment of a meeting of the Academy of Medicine, and, after passing a few words with him, *slapped his face*. But we will copy the account of the affair from the *Chronicle and Times*, of May 20th, 1873, which we believe is generally admitted to be substantially correct:

"Dr. B. F. Miller, who holds a place on the staff of the Cincinnati Hospital, recently performed the operation of gastrotomy on a colored woman, an inmate of the institution. It was done on account of a uterine fibroid. The last issue of the *Clinic*, May 9th, 1873, thought proper to question the necessity of the learned Doctor's surgical performance, and mentioned under the head of "A Bold Operation," that the whole mass removed, "uterus, tumor, ovaries, ligaments, etc. etc.," weighed only one pound and thirteen ounces. The paragraph in conclusion had this choice bit of irony: "The patient, a poor colored woman, died in fifty-three hours." This article was brought to the attention of Dr. Miller yesterday. It stirred his anger and cut his pride. Taking counsel with himself, he laid out a course of procedure in order to heal the torturing wound that had been caused by the editor of the *Clinic*. Now, Dr. J. T. Whittaker is the responsible and fighting member of the *Clinic* staff, and to him Dr. Miller addressed the following at the close of the Academy last night:

"Are you the editor of the *Clinic*?" "Yes." "I want to know the author of that article"—pointing to the offensive paragraph. "It is an extract from a letter." "Who wrote the letter?" "I refuse to answer." "Are you responsible for the article?" "Yes."

"At this Dr. Miller described the segment of a circle in the air, stopping the line with his right hand on the left cheek of Dr. Whittaker. With fury glistening from his countenance, and his cheek reddened by the blow, Whittaker raised a heavy cane, and was about to bring it down on the unprotected skull of Miller, when Dr. M. B. Wright threw

himself into the breach and caught the blow in its descent. Dr. Seely, a supporter of Whittaker, also interposed, when Miller expressed a desire to demolish him. Other friends, however, came to the rescue, and separated the combatants, each going their several ways."

Now, we always deprecate the employment of violence, but Dr. Miller has, in extenuation, that the provocation was very great. To take issue as to the propriety of the operation would have been altogether proper, and even to criticise severely if it was honestly thought that it had been performed without justification, and the life of the patient had been unnecessarily sacrificed; but the very first reading of the article in the *Clinic* makes it very evident that both writer and editor had no other object in view than to gratify their malice by inflicting an injury.

In the *Commercial*, of May 21st, Dr. Whittaker published a card, from which we clip the following, and which goes still further to exhibit the maliciousness of his motives:

"It was a simple narration of a fact which is not denied. It needed no comments. To the professional reader it is the statement of a cruel and totally unjustifiable operation, without parallel, perhaps, in the annals of medicine, and whose fatal termination is next to certain. No names were mentioned in the note. It was not intended as an attack upon an individual. It was published as another illustration of the effects of the iniquitous system now and for some time in practice at the Cincinnati Hospital, of appointing men to positions upon its staff merely because of their relationship to the appointing power. It was also an item of medical news, and as such received a place in a paper devoted to the publication of such things."

The pretense of publication as an item of medical news is good.

We would have made no allusion to this disgraceful affair if it were not that it has been widely spread abroad through the daily papers.

MICROSCOPIC OBJECTIVES.—Mr. E. GUNDLACH, the famous maker of microscopic object glasses, formerly of Berlin, Prussia, now of Hackensack, New Jersey, has just completed for us two objectives, a 1-6th and 1-24th immersions. Dr. J. J. Woodward, the distinguished microscopist of the Army Medical Museum at Washington, to whom we submitted them for examination, in a letter to us speaks of their performance in the most complimentary manner, saying: "I am sorry you were not present at my trial of the objectives, for I think you would have been pleased with their performance. The 1-6th did admirably on amphipleura pellucida [by sunlight], and is, I think, correctly named. At 50 inches from micrometer to screen it magnified 300 diameters, when corrected for uncovered objects; 340 when the collar was fully closed. The 1-24th showed the nineteenth band of Nobert, and resolved amphipleura superbly. It is not correctly named according to the English nomenclature; at 50 inches from micrometer to screen it measures 850 diameters at the uncovered point; 1150 when fully closed. It is therefore properly about a 1-17th. I suppose Gundlach named it by its performance when closed, which is equivalent to that of a single lens, of 1-23rd focal length; but that is not the way we do in this country and England. * * * * *

"When the price is taken into consideration, both of these objectives are wonderfully good."

Wales' 1-15th, as tested by Dr. Woodward, and reported by Dr. Richardson, of Philadelphia, in his work on Medical Microscopy, resolves only the seventeenth band of Nobert.

The English, as is well known, are in the habit of underrating the magnifying power of their objectives; Powell & Lealand's 1-16th,

for example, is more properly a 1-20th. Mr. Carpenter in his work on microscopy speaks of this disposition on the part of English makers to rate their objectives at less than they should be, as, for instance, he states, a power that is usually a fifth is named a quarter, etc.; for it is to a manufacturer's credit for a quarter to do the work of a fifth, or for any lower power to do that which ordinarily could only be expected by a higher power. Mr. Gundlach, however, in his mode of measurement in rating the power does not do his lenses justice when compared with those of American and English manufacture.

In our own hands the performances of the objectives made for us by Mr. Gundlach are fully equal to those of the most celebrated makers of the world. In the few days we have been in possession of them, we have been using them in resolving diatoms, of which we have a very large number by different mounters; and we have had no difficulty in the resolution of the most difficult tests with either the 1-24th or 1-6th. We have a Powell & Lealands 1-16th immersion, of which Mr. Powell said that a better one had never left their manufactory, and up to the present time we have been able to resolve, with either one of the lenses which Gundlach has made for us, all that we have been able to do with it. A 1-6th that resolves "admirably" the markings of amphipleura pellucida, a test that is considered by some, if any thing, more difficult than the nineteenth band of Nobert, must hold the highest place among objectives of the finest definition.

A matter, too, of consideration with the majority of persons in the purchase of Gundlach's objectives is their great cheapness. The price of his 1-6th is only \$26 [gold]. The price of Tolles' 1-6th, of a like angle of aperture, is \$75 [currency]. Gundlach's 1-24th is quoted at \$55 [gold]; Tolles' 1-20th at \$180 [currency].

We regard an objective that is able to resolve in a most satisfactory manner all the most difficult tests found among the diatoms, which Gundlach's can do, the price of which is only about \$30 currency, as one of the remarkable things.

THE OBSTETRICAL JOURNAL OF GREAT BRITAIN AND IRELAND is the title of a new monthly reprint, of which the first number was issued in April. Its English editors are Drs. James H. Aveling and Alfred Wiltshire, who are supported by a large corps of prominent British obstetricians and surgeons. It is published in Philadelphia by Henry C. Lea, with an American supplement edited by William F. Jenks, M. D. The present number contains seventy-two pages, with sixteen pages additional in the American part. It is furnished at five dollars per year, is printed in the best style, and will be a welcome and desirable addition to the literature of the department. It contains interesting articles by Dr. Barnes and other well-known writers.

THE POPULAR SCIENCE MONTHLY, for June, 1873, published by D. Appleton & Co., of New York, has the following contents:—The Constitution of Nebulae, by Dr. H. Schellen (illustrated); The Hygiene of the Ear, by James Hinton; Economy of Railway Locomotion, by J. W. Grover, C. E.; Instincts in Insects, II., by George Pouchet; A Scientific Home-Missionary (portrait); The Study of Sociology—The Political Bias, by Herbert Spencer; Domestic Economy of Fuel, I., by Capt. Douglas Galton; The Drift-Deposits of the North-West, I., by N. H. Winchell; Some Observations on Niagara, by Prof. John Tyndall; State Geological Surveys, by Prof. Albert R. Leeds; Natural Selection in Politics, by Prof. D. H. Wheeler; Baron Liebig (portrait); Editor's Table—Literary Notices—Miscellany—Notes.

Price 50 cents a number, or \$4 a year.

THE CINCINNATI MEDICAL NEWS.

VOL. II. CINCINNATI, JULY, 1873.

No. 7.

HEREDITARY DISEASE.

By NATHAN ALLEN, M. D., Lowell, Mass.

[A paper read at the annual meeting of the Mass. Medical Society, June 3rd, 1873.]

In the history of medicine there is no department in which a greater advance has been made than in a better knowledge of the nature and causes of disease; and there is no term employed in medical science, the meaning of which it is so important to have clear and definite ideas of, as that of disease. The most concise definitions given by different writers are, "deranged function and alteration of structure;" "any deviation from health in structure or function causing pain and uneasiness;" "any state of a living body in which the natural functions of the organs are interrupted or disturbed."

One of the most popular English writers on medicine gives this general definition,—“disease is but a deviation from the state of health, consisting for the most part in a change in the properties or structure of any tissue or organ, which renders such tissue or organ unfit for the performance of its actions or functions according to the law of the healthy frame.” It would seem by these definitions that in order to have accurate and distinct ideas of the nature of disease, we must have some knowledge of its opposite state, viz., *health*. This term is variously defined. In a general sense it is “that of a body in which all the natural functions are performed with regularity and harmony.” But then, if we are guided by the common use of the word health, we find it applied in such a variety of ways that it implies a difference in health; and many include only certain parts of the body. In fact, the word is used so vaguely, or with such latitude, that it is difficult to define it satisfactorily.

Thus, while in one sense the terms disease and health are antagonistic, they also have a relative meaning, signifying that there are grades or degrees to each, with lines radiating at times from each other, and again approximating so near together that it becomes difficult to distinguish any border ground between them. But in the case of disease, there is this seeming advantage, that we can the more readily single out the particular tissue or organ affected; when the question naturally arises, what is the cause of disturbance or derangement? Hence, in order to understand the nature or character of a disease, it becomes necessary to investigate its cause or causes. Thus the meaning of the two terms, health and disease, for a full understanding, cannot be well separated.

The results of investigation in this direction constitute an important department in pathology, which, in a short period, comparatively, has added very valuable knowledge to medical science. One of the most popular writers upon this subject recently made the following remark:—"Advances in the science of medicine in future years will be mainly due to a better knowledge of the cause of disease; and just in proportion as our knowledge of physiology and pathology becomes more exact and extended, so will the causes of disease be better appreciated, and its occurrence on a large scale be more readily prevented." A search in the same direction led Dr. John Forbes, perhaps the greatest modern reformer in medicine, to say, "here the surest and most glorious triumphs of medical science are achieving and are to be achieved." This remark was made twenty years ago, and, since that period, the record of improvement and discovery in pathological researches has been crowded with triumphs. The field is still open, and nature invites all inquirers after truth to push their investigations farther and farther.

With the hope of contributing something to science in this direction, we propose to consider in the present paper a distinct class of diseases, with reference more particularly to their cause than to their nature. We refer to that class called *hereditary*—those that are inherited, or said to be transmitted by the laws of hereditary descent. And for the sake of convenience in the discussion, these diseases will be divided into three classes,—

1st. The class that are well known as congenital and abnormal in structure.

2nd class, where the seed or germs of disease are transmitted, requiring only time or occasion to be developed.

3rd class, where the organization itself in its development is such that, under certain circumstances, or exposed to certain influences, diseases of structure or function will inevitably be generated.

The fact that there is a class known as hereditary diseases, is admitted, we believe, by all writers on medical science. In the early history of Greece and Rome, we find frequent reference by different writers to the resemblance between children and parent, but only occasionally is any allusion made to the fact *that* diseases also were thus transmitted. The more prominent writers referring to this subject were Tacitus, Horace, Lucretius, Aristotle, Hippocrates, and Aretæus; and among those of more modern times are Boorhaave, Cullen, Prichard, Lucas, Portal, and Mercatus. Near the close of the last century a new era was introduced in the study of medicine; that was, to obtain by dissection and observation a correct knowledge of the anatomy of the body in a diseased state. Bichat took the lead in this great reform, and is therefore justly styled the father of pathological anatomy. Since that time the study of pathology has been prosecuted with very great success.

While writers have generally admitted hereditary agency as a most fruitful source of disease, there has been some difference of opinion as to what particular diseases originate from this cause, as well as to just what extent this agency exercises an influence. One fact is very patent; that is, the individuals who have given the most time and attention to this inquiry urge its importance most, and assert that this agency in the production of disease is far more powerful than is generally supposed. Statements expressing this opinion might be cited, or quoted from numerous writers, but one must suffice for the present. Sir Henry Holland, now president of the Royal Society, says:—
“We can scarcely name any organ of importance which does not afford evidence of diseased actions derived from structure and transmissible by descent. The subject is one that meets us in practice at every step, and to which our attention is perpetually required as an exponent of symptoms; as affording some of the most certain means of prognosis; and as directing us in many particulars to the right course of treatment. No judicious phys-

ician will neglect the resources hence derived, which are in truth essential to sound and successful practice. *It is probable they will be largely augmented in future both by more exact and ample observation of facts, and by the extension of our knowledge of principles in this remarkable branch of physiology.*" This last sentence we italicize, inasmuch as it intimates so positively that some new principles would be evolved from physiology which might greatly extend our knowledge.

While the causes of disease have been for a long time most thoroughly investigated in every possible direction, and our knowledge has thus been much enlarged, very little new light has been shed upon *hereditary causes*, or influences. The difficulty, as we apprehend, is that the laws of hereditary descent have not been correctly understood or well-defined. Some writers seem to have regarded the reproduction of the species, as an agency in causing disease, to be enveloped in so much mystery, that but little knowledge of pathology could be obtained from this source by any amount of study or observation. Others have been more hopeful—have closely questioned nature from different points of view; have, in a multitude of instances, traced out the sources of or predispositions to disease from children to parents, as well as physical weaknesses and defects resulting in disease, and which many have extended through several generations. There are still others who have undertaken to define or expound the laws of inheritance by mapping out distinct portions of the body, and establishing a theory upon a too partial or limited view of nature.

We believe, however, that there is founded in nature an universal law of propagation, upon which the laws of inheritance are based, subject to certain conditions; and that when these laws are correctly interpreted we shall be able to ascertain the real causes or primary sources of many diseases far better than we now do. This law applies not only to the human race, but extends throughout the whole animal and vegetable kingdoms. We will here state our understanding of this law briefly, noticing particularly its relations to hereditary diseases, without attempting to present any proof or illustration of its truth, which would require a volume to do anything like justice to the subject.

This law of propagation is based upon a perfect standard of organization, or consists in the perfectionism of structure and

function ; or, in other words, that every organ in the body should be perfect in structure, and that each should perform its legitimate functions in harmony with others. Taking this, then, as a standard, we have a guide or model by which all changes in organization may be tested. But nowhere in nature do we find perfect standards—only approximations towards them; the deviations being almost endless in variety. As “like begets like,”—here comes in the law of *heredity*, and, as two distinct agents are concerned in the union, the hereditary effects become more varied and complicated. If the organization of both agents or parents was perfect, or was very near alike, we should find the law of likeness or resemblance more generally exemplified in their offspring. But in this union of the sexes the results depend very much upon several conditions, such as age, mutual adaptation, the health, the physical and mental state, etc. There are also some other conditions which modify this law of propagation, such as food, climate, exercise, etc., though these are mostly external, and exert their influence after the birth of the progeny.

It might seem at the first thought, in the blending and mixing up of so many dissimilar qualities, together with the numerous conditions to which they are subject, that weaknesses, defects, or diseases, etc., could not easily be traced from child to parent, or through successive generations. This may be difficult in some cases, but then, in proportion as these abnormalities, deviations, irregularities, or peculiarities are marked or predominant in the organization, they are more or less likely to be transmitted, and, it may be, in an intensified form. If anything abnormal in structure or morbid in function, predisposing to disease, should exist alike in both parents, it becomes generally intensified in the offspring. Thus, if either the nervous or sanguineous temperament is predominant in both parents, that temperament will be very predominant in their children, and will be peculiarly liable to the diseases that generally accompany such an organization.

The question might arise, does this hereditary influence extend to every internal organ, and to every tissue in the system, as well as to outward forms and appearances? It is true, we may not always be able to trace the marked evidences of it, but all the general facts, as well as analogy, look strongly that way, and such is the testimony of those who have investigated most thoroughly this department of physiology.

What relation has this law of propagation and heredity to disease? Most intimate and important, we answer. Unless there are some fixed and settled principles that govern the propagation of the species, and determine just the kind and character of organization transmitted, how can we trace far back the precise causes of certain diseases, or estimate properly the extent of hereditary influences? This law constitutes a kind of key to unlock in nature what would otherwise be obscure and mysterious. It is to the inquirer after truth in hereditary pathology what the chart and compass are to the mariner at sea, sailing along a comparatively unknown coast. In considering this law of inheritance, it may be more convenient to notice at first those hereditary effects that are the most obvious. These we place in the first class. They are termed, sometimes, in books, *congenital*; are abnormalities in structure; some of them would not come strictly under the head of disease, while others would; and most of them induce or lead to diseases of the gravest kind.

We have deformities of the body in size and proportion: giants, dwarfs, additional parts, as fingers and toes; we have deformed organs and parts, such as club-foot, hare-lip, hernia, spina-bifida, hunch-back, strabismus, cataract, hydrocephalus, and other malformations both external and internal.

While it may be difficult and perhaps impossible to trace back many of these abnormalities to their exact primary cause, still, in a large majority of these cases, we think, by careful inquiry and investigation, they can be accounted for either directly or indirectly by hereditary influences. Such abnormalities cannot occur without a cause, though it is impossible for us always to fathom or expose all the secrets of nature, especially when her agency is concealed from our inspection and may be carried on through several generations. Since so large a part of these cases—probably a majority—can be explained as arising from hereditary causes, and as nature knows no exceptions to her laws, the presumption is that all these anomalous cases have an origin from similar sources.

Under this head may also be included what are denominated the *defective classes*, such as the idiotic, the blind, the deaf and dumb, and the insane, as far as their defective organization arises from an hereditary cause. While it may not be possibly to determine just what proportion of each of these classes came

into the world with a defective organization, or simply with a predisposition to these complaints, it is well known in the case of large numbers that the cause of their abnormality has an hereditary origin. And, reasoning from analogy, is there not a strong presumption that the defects or anomalies in many others of these same classes, might, if they could be traced step by step, be referable to the same sources? For all these abnormalities arise from violations of law. If then the great law of propagation is based upon a perfect standard in nature, and the law of inheritance grows out of the changes or deviations from this standard, transmitted from parents to their offspring, how important that these principles be correctly understood, and the consequences, too, of their violation.

2nd Class of Hereditary Diseases.—In this class may be placed those diseases where the seeds or germs are transmitted in a dormant state, requiring only time and occasion to be developed. This may exist in a change of structure, or morbidness of function, or poison in the blood. The class is very large, and we can notice only a few of the more prominent diseases. Taking the lead in this class, particularly in our cities, is *syphilis*, which primarily is communicated in the blood. The very germ of this disease is a most violent poison, and, being transmitted in the blood, it penetrates through every organ and fibre of the system, and may vitiate every secretion. It combines with other diseases, aggravating their form and rendering their treatment more difficult as well as the result more doubtful. There is probable no one disease at the present day so extensive in its sweep, so injurious in its effects, and one which bodes more ill in the future to human welfare. Whatever differences of opinion may exist as to its medical treatment, or as to employing legal means for its suppression, all agree that the germs or the disease are hereditary—a poison in the blood—and may be transmitted through successive generations.

The next disease in order properly in this class is *scrofula*. This may be transmitted in the blood or in the form of tubercle. If we use the term in the widest sense, scrofula would include certain diseases of the skin; also glandular swellings and morbid growths, as well as tubercular deposits, particularly in the lungs. So diversified are the forms in which this disease appears, and so obscure are many of its symptoms, that it is very difficult to

draw the lines between scrofula and some other diseases. But in one thing there is a general agreement of opinion; that is, though the disease is frequently developed and aggravated by secondary causes, yet the poison in the blood or the germs of the disease have their origin, in most cases, from hereditary influences. In confirmation of this statement, the following fact may be cited: In the last report of our State Board of Health, to the question—put to two hundred and ten physicians—“Is consumption caused or promoted by hereditary influences?” only one physician answered in the negative. In this question, the term, “promoted,” may have influenced some in their decision, as there is greater uniformity in the testimony here given than is usually found.

There are several diseases near akin to scrofula that are generally considered to have an hereditary origin, viz., richets, cancer, and malignant tumours. These may occasionally occur from other sources, and are always aggravated by secondary causes. Gout, erysipelas, and rheumatism are classed by many writers under the head of hereditary diseases, though often produced undoubtedly by other causes. The predisposition or diathesis leading to these diseases, are strongly marked in particular families. Chomel, the distinguished writer on pathology, states that more than one-half of the cases of rheumatism may be traced directly to hereditary causes. There are several diseases of the brain that are thought to arise from this source, such as epilepsy, apoplexy, and paralysis. It is a well-established fact that where there is a great predominance of the brain and nerves over the other tissues, a certain class of diseases will uniformly be developed. The same fact may be stated of what is called the sanguine or bilious temperament; certain diseases accompany them. So strongly marked or controlling is the influence between a certain type of organization and class of diseases, that wherever there is found a predominance of one of the temperaments or a certain class of organs, the particular diseases that attack the individual may be predicted beforehand.

With reference to *chronic* diseases, which have been superinduced upon a healthy structure, there may be difference of opinion as to how far they are hereditary in their effects. This may depend much upon circumstances.

There is another question intimately connected with this sub-

ject, viz.: What are the hereditary effects of *habits*? If these habits are of such a nature as to injure the health and impair the constitution, their hereditary influence must be bad; and that, too, in proportion to the injury produced upon the system. For illustrations: The frequent or long-continued use of intoxicating liquors, of narcotics, of stimulants, etc., must injure the health and affect the vital forces, if not taint the blood, so as to implant in the offspring a strong predisposition to the same habits, and the consequent liabilities to disease.

The third class of diseases, or predisposing causes, are peculiar, and require some explanation. All works on pathology dwell or lay great stress upon the predisposing causes to disease—considering the body, in certain cases, is so organized or constituted that diseases will inevitably be generated when the system is exposed to certain exciting or determining influences. This suggests the importance of the great law of propagation, and presents new stand-points for the study of disease and its causes. As this law is based upon a perfectionism of structure and function, it implies that there must be an exact balance in all the organs, and perfect harmony in all their functions. In their normal state each organ has a specific work to do, and in doing that work should not be interfered with or disturbed by any imperfection in the action of other organs. In this case, the “wear and tear,” or the demands which nature makes to support life, and carry on its operations, comes upon all the organs alike. In some respects, the body may be compared to a perfect machine, made up of many very complicated parts. How different is the working or running of such a machine from one imperfectly constructed and unequally balanced in its parts! The one seldom needs repairs; the other, constantly. The one will last, as it were, for an age; the other is entirely used up in a short time. But in the human body we have something more than mere *mechanism*; we have an organized living being, with its most delicate and complicated parts wonderfully exposed; and when once injured they cannot easily be repaired.

Taking this perfect or normal standard of organization whereupon the law of propagation is based, and applying the laws of hereditary descent, we get new and important views of physiology in its relations to disease. We see that wherever there are abnormal developments—where a certain organ, or class of or-

gans, is relatively too large or too small, causing a want of balance or harmony of action in the system, there must be in the very nature of the case far greater liability to disease. And when these abnormal developments are carried to extremes, nature's laws are more frequently violated, and hence arise most fruitful sources of disease. It is in this imperfect, ill-balanced organization where we find not only the greatest amount of sickness, but that which is the most obstinate and fatal. The reasons for such a result are obvious when the true laws of inheritance and disease are taken into account. Now, in no possible way can a thorough or correct knowledge of pathology, in its relations to hereditary influences, be obtained until the true laws of propagation and inheritance are understood, whether those here expounded are the true ones or not. There are three considerations connected with this subject to which special attention should be called:—

1st. The great advantages which a knowledge of those primary laws afford. In the application of all remedial measures, it is of the highest importance to understand, at the out-set, the precise nature and cause of the evil to be removed. And in making up our diagnosis of disease, we should avail ourselves of all the sources or means that can shed any light upon the case. By an application of these principles the peculiar physiology of every patient is more easily understood. We see, readily, the strong and weak points in his organization; what parts or organs are most predisposed to disease, as well as to what particular diseases. Aided by a knowledge of these laws, we can push our inquiries and make our observations in detail to far better advantage. If there are any peculiarities or idiosyncrasies in the constitution of the patient, they are more readily discovered. There is also another feature in organization which it is very necessary to understand in its relations to disease—that is fineness of fibre or quality of texture, and which pertains to the whole system. This fineness of fibre or delicacy of structure has much to do in providing vital forces to resist disease, and it is through the laws of inheritance that we find such differences in organization. This quality pervades not only one organ, but extends to every part of the system, and is transmitted from generation to generation. This kind or type of organization has a far more intimate relation to disease than is generally supposed.

2nd Consideration. In the *treatment* of disease, a knowledge of these laws is of great advantage. Within a few years there has been much discussion as to the relative influence of nature and art in the cure of disease. Once too much reliance was undoubtedly placed in the power of medicine, and it was prescribed in such variety and quantity as to aggravate, if not prolong, disease. In this respect there has been great improvement in medical practice, and, while occasionally too much medicine may now be administered, there is danger of going to the other extreme of dispensing with medicine entirely. What we want is, avoid both extremes; adapt our treatment to the laws of nature; and in order to do this correctly, we must understand not only the nature and laws of disease generally, but the material, the peculiar organization, of every patient; what his temperament is; what are the weak points in his system; what aids and forces his constitution will afford to withstand disease, and assist the means of recovery. The more exact and thorough is our knowledge of individual physiology, the more wisely shall we be enabled to apply all hygienic agencies, as well as medicine, in the treatment of disease. Now by having constantly before the mind a physiological standard, which is normal and perfectly healthy, and then, by carefully surveying the deviations from this standard in the organization of individual patients, we obtain clearer and more definite views of the weak and delicate points in their constitutions, and can thereby better apply our remedial measures. Thus by a more correct and exact knowledge of hereditary predisposition, or, in other words, of the recuperative powers of nature in each individual case, we can make a wiser and more skillful use of the resources of art. As a general thing, the most thorough physiologists make the best practitioners of medicine.

3rd Consideration. Perhaps the most concise and practical definition of the object of medicine anywhere to be found was given by a distinguished member of this society, who is now the Nestor in the profession in this city; I refer to Dr. Jacob Biglow. The practical view of medicine, says Dr. B., is this, "it is the art of understanding the nature of diseases so as to comprehend fully their causes; and to prevent their occurrence when possible; also to promote their cure or to relieve them when they do occur." It is the first clause in this definition that claims more

especially our attention. It is such a knowledge of the causes of disease that both the cause and the effect, if possible, can be removed—it is the *prevention* of disease as well as cure. This should certainly be the aim of the profession as much as the mere administration of medicine. And it is a gratifying fact that every year we hear more and more of the importance of sanitary laws and the principles of hygiene. The public at large are beginning to realize more fully than ever the meaning of those trite proverbs that, “a stitch in time saves nine,” and “an ounce of prevention is worth a pound of cure.”

How and where can disease be most effectually prevented, and that too on the largest possible scale? It is not so much, perhaps, by a general diffusion of a knowledge of physiology, as that every individual should understand correctly his own constitutional weaknesses, defects and liabilities, so that he can thereby take better care of himself under all circumstances and exposures. Let him learn early what are his hereditary tendencies, what are constitutionally his weak points, and to what complaints he is most liable. But to do this properly and successfully, the true laws of propagation and inheritance must be better understood. It could not have been intended by the Creator that man should always be ignorant of laws so useful and important.

But there is a wider and more extended view to be taken of this subject than its application to individuals; that is, the prevention of disease upon a large scale. We hear much said of this importance to health of the right kind of food, of good air, of pure water, of proper drainage, of the situation and construction of dwellings, etc. We find almost daily articles discussing these several topics both in newspapers and periodical journals, showing that there is a growing demand for such information. Members of the medical profession and others are pushing their inquiries into every department of science for new means or knowledge whereby disease may be prevented or cured. But there is one source or cause of a great deal of sickness and suffering, more important in many respects and far more reaching in its influence than any of those mentioned, to which comparatively very little attention has as yet been given, that is the want or value of a sound, healthy and well balanced organization at birth. It requires no facts or arguments to show to the

practising physician what a wonderful difference there is in the amount of sickness under almost precisely the same circumstances, between some individuals and families and others; and then how some patients will recover from the most violent and lingering sicknesses, while others die easily from very slight attacks of disease. This difference in vitality arises mainly from the difference not only in the nature, vigor and strength of constitution, but that one patient descended from a sound, long lived and healthy stock, whereas the other inherited the weaknesses and diseases of its parents or ancestors. In every community may be found individuals and families possessing each of these characteristics.

In no one way, in our opinion, can so much sickness and suffering be prevented as in obedience to the laws of inheritance, but, in order to effect any great change in this direction, it must extend through several generations. But how can this improvement be made without a correct knowledge of the laws of propagation and hereditary descent? Unless we have some definite and fixed principles to guide us, how can we here reach any certain and satisfactory result? There must be some fixed laws of this character based upon physiology. Interests of such magnitude, results so important connected with the operations of nature, would never be left to mere chance or accident. All true science is supported by great laws or principles, though they can not all at once be discovered, or be correctly interpreted for ages.

It has been estimated by some writers that full one-third of all the sickness that now afflict society might be prevented by a wise and intelligent application of the principles of hygiene. Now if the physiological requisitions for entering the marriage relation were heeded as they should be, both by man and woman, the predispositions to, or germs of, disease would be diminished to a most surprising extent. Let these requisitions be faithfully adhered to through several generations, and it would be difficult to conceive or estimate what an immense difference it would make in the amount of sickness and mortality.

By applying sanitary laws in the matter of ventilation, drainage, pure water, etc., we only cut off some of the branches of this upas tree, but by strictly obeying hereditary laws we eradicate or destroy the roots of disease. It is much easier to dry up

the springs or cleanse the fountain than to purify large flowing streams filled with poisonous feculence.

It may be said, if the views here expressed of disease should be practically carried out, it would most seriously affect the business and the interests of the medical profession. We admit the truth of such remarks, but, in behalf of humanity, as well as in obedience to the laws of the Creator, we would gracefully submit. It would afford occasion for the profession to act from purer motives and upon a far higher plain of observation.

As society is now constituted there is one standpoint from which a view may be taken of our duties that is not very ennobling. It is this: That so much of our time, thought and labor are expended upon those constitutionally puny, feeble, diseased and sickly for the sake of preserving life, when these very individuals, it may be, will transmit to posterity the seeds of still more weakness, disease and suffering. Such a view of the results of our labors is not at all pleasant or gratifying. While, therefore, we attempt to discharge the duties of the passing hour in relieving pain and suffering, let us faithfully expound and apply, as far as possible, the great laws of life and health, in the *prevention* as well as in the cure of disease. And though we may not find our compensation in dollars and cents, it will surely come in the consciousness of having done our duty, and in the end, that our lives have not been spent in vain. About forty years ago a paper was read before this society that startled its members. The idea was broached that there were a class of diseases which medicine could not break up, nor limit their duration, and whose leading symptoms were not safely subject to much control or interference. Inasmuch as these diseases seemed to be governed by certain fixed principles of their own, they were denominated "*self-limited*," a new term in nosology, but most appropriately applied. These views of medicine, differing so materially from what had been generally entertained, were not very kindly received at the time, were thought by some to be extremely ultra, and, by others, to be decidedly erroneous. But in the process of time they were found to be, after all, remarkably correct, that they accorded fully with the laws of pathology, and the trouble in their reception arose from the fact that they happened to be in advance of the state of medical knowledge generally. In the history of science such instances have fre-

quently occurred, but it is seldom where the leader or discoverer has been permitted to see so great a change as in the present case. Whatever may be thought of the views now presented to your consideration, we are confident that time and observation will testify to their truth. We live in a day of progress, of discovery. The course of true science is always advancing, and in due time all her great laws will be vindicated and established upon a sure and enduring foundation.

DIARRHEA, A SYMPTOM OF PULMONARY TUBERCULOSIS.

By A. P. DUTCHER, M. D., Cleveland, Ohio.

I.—THE CLINICAL HISTORY OF TUBERCULAR DIARRHEA.

Diarrhea is a common attendant upon pulmonary tuberculosis. Statistical tables made out from cases that have occurred at the Hospital for Consumptives, at Brompton, London, show that diarrhea began early in the disease, and continued throughout its whole course in one out of every eight patients; and only one in twenty-five escaped it altogether. In some instances, it preceded every other symptom of the disease; in about one in eight cases it began at the same time as the disease in the lungs, and attended its whole course—from five to twelve months, and in some cases much longer—but in the great majority of the cases it began at the latter half of the disease, and continued with more or less severity until the end.

When it occurs early in the disease, it is a symptom of more than ordinary gravity. In some phthisical patients it is the first symptom that announces the approach of the wasting malady; hence it has been called colliquative, from its blighting and withering influence upon the system. When it occurs thus early, and is unyielding to appropriate treatment, we may look for a speedy termination of the case; for there are few things which exhaust the vital forces more rapidly than a constant and profuse diarrhea. It will bleach a patient out directly, so that you will hardly know him. In acute miliary tuberculosis it sometimes constitutes the most annoying symptom, and the physician has often not detected the lung trouble until the very last, having had his attention directed exclusively to the diarrhea.

II.—THE CAUSES OF PHTHISICAL DIARRHEA.

This is commonly the effect of ulceration in the small intestines and colon. These ulcers usually commence in the mucous follicles of the small intestines, and, when once begun, the ulcerating process extends itself indefinitely to the surrounding mucous membrane. These ulcers are mostly produced by the deposit (softening and deposit) of tubercular matter. And in most cases the entire process is accomplished without any very marked symptoms of inflammation. These tubercles are mostly of the miliary form, very small, not more than one-sixteenth or eighth of an inch in diameter. They have an opaque, cheesy appearance, and, when we examine them minutely, we find that they are composed of immense numbers of granules of fat, withered nuclei; in others we find that the center is semifluid, softening down; while in others still more advanced, we find that the slight covering of the mucous membrane has given way, and a small ulcer is formed with a depression in its center, and an irregular excavated margin.

At the base of these ulcers, immediately beneath the peritoneum, are sometimes found numerous minute tubercles, arranged in nearly the same form as we find them in the lungs, and by softening and expulsion they increase the magnitude of the ulcer. We do not, however, find these ulcers always presenting the appearance just described. Not unfrequently we find the mucous membrane raised, presenting a swelling about the fourth of an inch in diameter, and on making an incision into it it is found to contain pus, and present the appearance of a common abscess in the mucous membrane.

A fortunate thing connected with these ulcers is that they seldom perforate the intestines. I never met with but one case. It was that of a young woman; she had been afflicted with pulmonary tuberculosis for more than a year; diarrhea was the chief trouble. One morning, just after rising, she was suddenly seized with an agonizing pain in the cæcum. She speedily collapsed, and died in thirty-six hours. Post mortem revealed a small perforation in the colon about an inch above the cæcum.

In some cases of diarrhea attending this disease, we find it alternating with constipation. I recently attended a case where this state of things occurred. For several days the bowels

would be very much relaxed, and could be scarcely restrained by the most active measures. Then again they became constipated, swollen, and painful, and would not move for days without physic. In this instance the disease was confined more to the peritoneum than the mucous membrane of the intestines. This was demonstrated by post mortem, for that membrane was extensively studded with miliary tubercles, and there was considerable serous effusion in its cavity.

This is an important fact in the diagnosis of phthisical diarrhea worthy of being remembered. Where we have such alterations in the conditions of the bowels attended with soreness on pressure, tympanitis, and pain on deep inspiration, we may, as a general thing, suspect more or less tubercular and inflammatory disease of the peritoneum, which is a grave complication of pulmonary tuberculosis, and adds greatly to the sufferings of the patient.

III.—THE APPEARANCE OF THE EVACUATIONS IN PHTHISICAL DIARRHEA.

These have no uniform appearance. In some cases, they are mixed with blood, in others with bile, mucus, and serum, or they may present a yeasty character; sometimes they are profuse, and attended with little or no pain. In other instances, the stools may be scanty, and composed of little else than blood and mucus, attended with pain and tenesmus, and the case may be easily mistaken for acute dysentery. In others, the evacuations are composed chiefly of blood, and amount to what might be called hemorrhage from the bowels. This is apt to be the case when the ulcers are near the sigmoid flexure or the rectum. I have the notes of one case in particular, where the patient succumbed to copious hemorrhage from the bowels, in consequence of several large ulcers near the sigmoid flexure, where there was but a very limited amount of tubercular disease in the pulmonary organs, not enough to cause the death of the patient.

But hemorrhage from the bowels frequently occurs during the progress of pulmonary tuberculosis, where there is no ulceration of the intestines. Obstructions from either pulmonary lesions or hepatic congestions which are so common in this disorder, may lead to engorgements of the portal circulation, which may be the means of producing congestion of the intestinal mucous

membrane, and may cause hemorrhage from it, in the same manner as we have extensive exudations of blood from the bronchial mucous membrane, without any special breach of structure. I have frequently known profuse hemorrhage to occur from the rectum in this disease, from simple engorgement of the hæmorrhoidal veins. And in many cases the patient experiences much relief from such discharges, when moderate in amount.

The appearance of the discharges most generally point out the source from which they come; if it arise from the hæmorrhoidal vessels, the blood will be abundant, and its color very florid, and it will either precede or follow the dejections; if higher in the intestines, it will be incorporated with feces; and when it travels a considerable portion of the alimentary canal, it becomes discolored by the secretions from the membranes. This is particularly the case, when the blood comes from the cæcum, or the stomach. In the latter organ, the acid of the gastric juice acts upon the blood, and it becomes black, and is evacuated from the bowels in the form of a fluid which very much resembles tar.

The distinguishing feature, however, of phthisical diarrhea, is its unmanagable character. It commonly resists all medical treatment: it may be checked for a short time, but it again returns, and frequently with renewed severity; and as a general thing physicians have ceased to employ any very active measures to arrest it, being persuaded that it is a concomitant of the constitutional malady, and that in this way the lungs are partially relieved by the bowels acting as a secondary scavenger, for the elimination of tubercular matter from the system; for it is a fact, which has been demonstrated by frequent observation, in cases of pulmonary tuberculosis attended with profuse diarrhea, that the chest symptoms are in a great measure kept in abeyance; cough, pain and dyspnœa are mitigated; and in some instances, the pulmonary lesion has been completely masked by the bowel symptoms, so much so that it was only revealed by post-mortem.

Another feature of this diarrhea as it manifests itself in phthisis is the period of the day at which it occurs. In most patients this is at night, particularly the after part. I have known patients to have six or ten evacuations from midnight till morning, while during the remainder of the twenty-four hours they would not be annoyed by it.

When diarrhea is very profuse, and accompanied with copious

night sweats, we may generally prognosticate a speedy and fatal termination of the case; few constitutions can long withstand such excessive drains upon the vital fluid, for they are both effete in their nature, and are the expressive symptoms of a profound tubercular dyscrasia.

IV.—A CASE ILLUSTRATING THE DIAGNOSIS OF PHTHISICAL DIARRHEA.

The diagnosis of phthisical diarrhea is not always easy. It is sometimes confounded with muco-enteritis; I have occasionally made this mistake, and have known others to do the same. Here is a brief description of one of my cases, it will serve for nearly all:

May, 14.—Called this day to see Miss E., aged twenty-two. Has been annoyed with diarrhea for four weeks; nervous sanguineous temperament; pulse 90; respiration 28; tongue furred, mouth dry; fever in the after part of the day, but no night sweats; complains of thirst; appetite very poor, and digestion badly performed; food passing through the alimentary canal almost unchanged; bowels tender to the touch, the evacuations abundant, thin, watery and attended with pain; urine scanty and high colored; catamenia regular but scanty; skin shallow, countenance dejected; mind hopeless; no cough, expectoration, dysœnea or pain in the chest. Has emaciated somewhat, and complains of weakness on attempting to exercise. She has no hereditary title to phthisis, and her health has been good until the present illness.

The diagnosis was muco-enteritis, and a favorable prognosis was given. A large blister was applied to the abdomen, and the following was ordered:

R	Mass. Pill, Hyd,	gr x.	
	Pulv. Opii.	gr xii.	
	Pulv. Ipecac.	gr x.	
	Pulv. Camphor.	gr xx.	M.

Ft. in pill. No. xx. Sig: A pill every six hours.

This treatment was continued for six days with marked improvement. The tongue commenced to clean, the afternoon fever abated, the evacuations from the bowels more natural and not so frequent, the expression of the countenance not so disponding and the mind more cheerful. As the abdomen still remained tender to the touch the blister was reapplied, and the pills were

continued every eight hours. Her diet was chiefly boiled rice, animal jelly, and gum water. Perfect rest was enjoined, with due attention to ventilation, bathing, and mental occupation.

On the first of June her symptoms were all improved, and a mild tonic course of treatment was instituted. For three weeks she appeared to be regaining her usual health. But after this there was little or no improvement. The diarrhea was troublesome, although her tongue was clean, appetite good, and digestion much improved. Various remedies were now prescribed without any special advantage. At this juncture Dr. F. was called in consultation, and agreed with me as to the nature of the malady, and suggested the following prescription :

R	Argent. Nitrate.	gr viii.	
	Morphiae Acetate,	gr ii.	
	Bismuth. Nitrate.	℥ii ss.	
	Ext. Conii.	gr xxx.	M.

Ft. in pill, No. xx. Sig: one pill three times a day after meals.

From this time until the first of August she was more comfortable; but on that day, just after breakfast, she had hæmoptysis. This was the first symptom of pulmonary trouble that appeared. The hemorrhage was quite free, but did not weaken her much. A careful physical exploration of the chest was now instituted, when the following signs were elicited:

Inspection showed the expansion movements of the two sides of the chest nearly equal. On percussion there was dullness on the right side, accompanied with prolonged expiratory murmur, with humid crepitation. On the left side the inspiratory murmur was harsh, the expiratory prolonged, but no marked dullness on percussion. These signs clearly indicate a considerable amount of tubercular exudation in the right lung, which was softening, and a much smaller amount in the left, which was crude.

Her decline was now rapid; cavities soon formed in both lungs, and she fell a victim to the disease on the 17th of October. The most annoying symptoms throughout the whole course of her decline was diarrhea, and so effectually was the disorder in the pulmonary organs masked by it, that if it had not been for the hæmoptysis the true nature of her malady would not have been known until almost the last. The physical signs of the pulmonary lesion were, no doubt, as marked on the first of June, as at the time we examined the chest, and it was a want of attention on our part that led us into such an error of diagnosis.

The case just described occurred before we had any knowledge of Dr. Thompson's gingival margin. Since then there need be no difficulty in distinguishing between phthisical and other forms of diarrhea. Although it is not always present in pulmonary tuberculosis, yet it is seldom found wanting where the intestinal mucous membrane has borne the principle shock of the disease, and diarrhea has been profuse and annoying. And where it is clearly defined upon the gums, I never hesitate a moment to pronounce the case tubercular.

And I am happy to say, that since the publication of my article in the *Philadelphia Medical and Surgical Reporter*, August 4th, 1860, on Thompson's gingival margin, I have received several letters from distinguished members of the profession, in this country and Europe, confirming the views expressed in that article, of its value as a means of diagnosis in pulmonary tuberculosis. Dr. Telephe P. Desmartis, a distinguished physician of Bordeaux, France, says: "I consider the gingival margin an infallible sign of phthisis pulmonalis. I have found it useful in detecting the disease in the incipient stage, and have thus been able to employ prophylactic treatment with advantage; * * * *its value is generally admitted.*"

And I would rejoice could I say as much for my own country. Its value is not appreciated here as elsewhere; I know this for the following reasons:

1. I never hear it mentioned in my consultations with members of the profession, as a symptom of any value, in making out a diagnosis of tuberculosis.

2. It is never mentioned as a symptom in cases of phthisis reported in our Medical Journals.

3. It is never once mentioned by our systematic writers on the practice of medicine. Not an American work on pulmonary tuberculosis, published during the last ten years, has a word on the subject.

The ignoring of a symptom so valuable as the gingival margin, is not a mark of wisdom in any physician or writer. By so doing, they reject one of the most important signs of the tubercular diathesis that nature has given us.

V.—TREATMENT OF PHTHISICAL DIARRHEA.

This should be conducted with great caution. Where it

depends upon imperfect chymification, pepsine, subnitrate of bismuth, and strechnia are useful remedies. Pepsine in particular may be prescribed with great advantage. I often hear physicians complain that their phthisical patients derive no benefit from its use. The reasons of this is, that it is improperly prescribed. When the pepsine glands of the stomach are healthy, and secrete a normal amount of gastric juice, there is no call for this article; chymification is complete without it, and when furnished in superabundance, it must to a certain extent interfere with other chemical agents that are useful in the normal process. We know that a certain portion of hydrochloric acid is demanded for the formation of healthy chyme; let more be taken than is necessary, it interferes with the healthy functions of the stomach, and in some instances produces painful digestion and diarrhea. The injurious effect of a superabundance of pepsine is not quite so obvious, although I have often heard patients complain of feeling much worse after taking it.

The indications for its administration may be briefly stated thus: There is loss of appetite or a fastidious one, pain in the head, the tongue slightly injected in its papillæ, and whitish fur upon it, though in many cases the tongue is clean, large and indented: there is sometimes nausea, or actual vomiting, the bowels are commonly very loose, the evacuations being composed mostly of undigested food, bile, and mucous. The patient also complains of a sensation of weight in the stomach after eating, followed by throbbing in the abdomen, with languor and drowsiness. In some cases, especially where the food remains in the stomach longer than usual, flatulence, heart burn, and sometimes agonizing gastralgia.

I now have a young lady under my care suffering with pulmonary tuberculosis, who had all the symptoms just described, that gave way in a few days by the use of pepsine. The practitioner should see that he employs a good article, for much of it sold in the shops is perfectly worthless; of no more use than so much starch or soda. M. Boudaut's pepsine is a very inferior article when compared to E. Sheffer's. If any one doubts this, let him prescribe Sheffer's a few times, and he will find that it will seldom disappoint his expectations. I now employ no other.

A combination of pepsine and bismuth sometimes acts kindly in phthisical diarrhea, especially where it depends upon indigestion. Here is a favorite prescription of mine:

℞	Pepsine [Scheffer's],	}	aa. 3 i
	Sub. Nitrate Bismuth,		
	Strychnia,		
	Pulv. Gum Acacia,		
	Sac. Albæ.		

gr. $\frac{1}{4}$
gr. xxiv
3 ii. M.

Ft. in chart No. xii. Sig. A powder every six hours.

When phthisical diarrhea depends upon tubercular disorganization, and its consequent inflammatory action in the intestines, pepsine and bismuth are of little use. It is true they may exert a soothing effect upon the ulcers, and a tonic influence upon the surrounding bloodvessels; but aside from this they have little influence. When ulceration exists in the small intestines, I have found the following a better prescription:

℞	Potassa Chlorate,	}	aa. 3 ss
	Tinct. Ferri. Hydrochlorate,		
	Aquæ Fentæ,		

f 3 vi. M.

Sig. A teaspoonful every four hours.

In those cases where inflammation is active, where the abdomen is tender to the touch, swollen, and the dejections profuse, I have found no remedy so efficacious as a large blister over the abdomen. This, in connection with opium, constitutes our chief reliance for the mitigation of the patient's suffering and the prolongation of his life.

When the dejections are scanty and partake of a dysenteric character, opium and astringents should be cautiously used at first. This condition often follows a constipated condition of the upper bowel; opium and astringents will not relieve this. In this case a brisk purge will often accomplish wonders. I have frequently seen individuals suffer for days under the use of opium and astringents, speedily and permanently relieved by a brisk purge of turpentine and castor oil.

When the evacuations are copious and watery, and the patient appears to be rapidly wasting away under their influence, a permanent astringent is needed, and I know of no combination of therapeutical agents more efficacious than the following:

℞	Pulv. Opii.	}	gr. x
	Plumb. Acetate,		
	Piperine,		
	Strychniæ,		

gr. xx
gr. vi
gr. $\frac{1}{4}$. M.

Ft. in mass: et. divide in pill No. 10. Sig. One pill every four or six hours, as occasion may require.

Suppositories of opium are of service when there is distressing tenesmus which disturbs the patient's rest, or where from irritability of the stomach an opiate cannot be administered by the mouth.

In those cases of pulmonary tuberculosis attended with hemorrhage from the bowels, particularly if it be profuse, and has resisted ordinary remedies, we would recommend the tincture of larch bark. It is an excellent astringent; I have prescribed it for years in every form of hemorrhage from mucous membranes. In profuse bronchial hemorrhage it has few rivals. When opium and acetate of lead disagree with the stomach, the tincture of larch bark may be prescribed with great advantage in nearly every form of diarrhea where an astringent is indicated. I recently treated a very grave case of chronic diarrhea, that had resisted all the usual remedies for the disorder, successfully with the following prescription:

℞	Tinct. Larch Bark,	}	aa. f 3 ss
	Tinct. Opil. Compound [Squibbs']		
	Tinct. Cinnamon,		
	Syrup Simplicis,	}	aa. f 3 i. M.

Sig. A teaspoonful every six hours.

In this case the stools were very copious, being composed of serum, mucus, blood, and feculent matter. The patient was very much emaciated, and little hope was entertained of her recovery. Independent of its astringent properties, I think it has a special alterative action upon all the mucous membranes of the body—restraining profuse secretion, removing congestion, and exerting a tonic influence upon the bloodvessels that supply the parts. In catarrhal diarrhea it is an invaluable remedy.

In the treatment of phthisical diarrhea little will be accomplished if the patient's diet is neglected. It is becoming quite common with some practitioners to prescribe raw beef in this disorder to the exclusion of vegetable food. From what we have seen of this mode of alimentation, we cannot say that it is preferable to a mixed diet. Amylaceous aliment, such as arrowroot, sago, and tapioca, made with milk may be used with benefit. Independent of their nutritious qualities they have a soothing effect upon the irritable intestinal mucous membrane. Milk, rice, breadtoast, and eggs may be used as the patient desires. Rich and greasy food, highly seasoned dishes, uncooked vegetables, and unripe fruit should be avoided. Beef, mutton, and fish should not be ignored altogether. Bread and animal jelly agree with most phthisical patients, and may be given *ad arbitrium*. But in prescribing food for individuals suffering with phthisical diarrhea it must be with caution. A little too much of the best article will sometimes cause mischief.

Thus while directing special therapeutical measures to mitigate phthisical diarrhea, we must not neglect to sustain the patient's vital powers by the administration of restorative hæmatics. Most patients will bear the following combination of medical agents very well:

R	Ferri. Citratis,	3 i	
	Solution Strychniæ, U. S. P.,	f 3 ii	
	Syrup Aurantii,	}	aa. f 3 ii
	Tinct. Cardamomi,		
	Inf. Colombæ,	f 3 iv.	M.

Sig. A teaspoonful three times a day after meals.

In most cases of phthisical diarrhea, it is well to delay the employment of opiates and astringents as long as the safety and comfort of the patient will permit. Opium in particular depresses the nervous powers and interferes with the nutrition of the patient; things to be avoided in the successful treatment of pulmonary tuberculosis. Tonics and proper alimentation are our chief reliance. Under the bracing mode of treatment this troublesome symptom of phthisis is often soon checked, and the digestive functions restored to their wonted action,

NOTES OF TREATMENT.

By R. B. ELDERDICE, M. D., Mt. Knightstown, Pa.

CHOREA.

Was called June 16th, 1869, to see Mary F., aged 23, unmarried, of highly scrofulous constitution, and subject of occasional attacks of subacute rheumatism. Found her in violent paroxysms of choreaic movements of face and extremities of left side of the body. The attack occurred suddenly, without any premonitory symptoms, and was severe from the first. The paroxysm could be arrested for an instant by speaking firmly to her, but would at once recur. She was put on fl. ext, valerian, cimicifuga and scutellaria, and the treatment perseveringly carried out until the 19th, when, in place of improvement, the paroxysms were more frequent and more severe. At this time the room was darkened, no one allowed admission, and bromide of potassium administered in doses of five grains every three hours; no other medicine being employed. Forty-eight hours continued use of the bromide potass. effected a complete, and, I believe, a permanent cure, as there has been no manifestation of

a return of the disease since, now nearly four years. The average duration of the disease is put down at two to three months, and relapses are of frequent occurrence. In this case treatment was continued five days after paroxysms ceased, when the bromide was suspended, and syr. ferri iodid. substituted.

CHRONIC URTICARIA.

Mrs. J. L., aged 52, married, mother of a family; had always enjoyed excellent health, with the exception, that for *twenty-seven years* she had been frequently afflicted with attacks of nettle rash; and during that time had been prescribed for by many physicians, both regular and irregular, without deriving any benefit more than a temporary one. In April, 1869, she came under my care, and received the routine of treatment laid down in "the books," without benefit.

The disease did not appear to depend on any derangement of the digestive organs, nor upon the taking into the stomach of any particular kind of food. About the time I was on the point of dismissing the case, as incurable, I prescribed fl. ext. gelsemini and bromide potassium morning and evening, and ordered a wash of carbolic acid (liquor) 1 part to glycerine 20 parts, to be applied to each wheal upon the next attack of the eruption. It proved beneficial, and my patient sent for "more of that last medicine." It was continued nearly a month, since which time there has been no return of the rash. On several occasions during this treatment the peculiar effects of the gelsemini upon the brain were observed. The lady quite recently assured me that she has not, for nearly four years, felt any symptoms of her former tormentor, that for 27 years had visited her regularly every few weeks, frequently compelling her to keep her bed for a day on account of the excessive itching and constitutional symptoms accompanying.

ACUTE PERIOSTITIS.

July 6th, 1869, was called in haste to visit Mrs. J. S., aged 47, married, mother of a family; a strong, robust woman, who had always been in perfect health. She had been out "berrying," and as she jumped from a fence, she fell, screaming from a sudden and severe pain in her left leg. The family supposed it fractured, and, carrying her into the house, summoned me in haste. Found no sign of fracture. She complained of severe

pain; the entire length of the shaft of tibia greatly increased by pressure or motion. No redness or swelling apparent. Had felt some pain in the limb for several weeks previous to this time. Adopted usual line of treatment for acute periostitis for several days without deriving any appreciable benefit. I then applied a large blister over the whole length of the tibia, and put her on iodide of potash and Dover's powder, of each five grains every four hours. Soon as the blister produced vesication all pain in the limb ceased, as if by magic, and the recovery was prompt. Some weeks later a large abscess formed below and behind the internal malleolus of that limb, but it seemed in no way related to the previous affection. The iodide potassa was given every four hours for four days, then three times a day. Patient was able to walk as usual, and completely convalescent by the 22nd, having been ill fifteen days, and visited seven times.

THE EYE AND ITS DISEASES.

By J. W. WRIGHT, M. D., Coshocton, O.

The frequency with which persons are afflicted with the disease known as granulated lids, induces me to make a few observations on the management of the affection. So slight are the symptoms accompanying it, that persons may be suffering with the disease for a considerable time without knowing what the real trouble is, or that it is any serious affection. Among the first symptoms of the disease is a feeling of roughness under the lids, as though sand or some other gritty substance was in the eye, as well as a gluing together of the lids in the morning upon rising.

At this stage of the disease the true granules can be seen scattered over the conjunctival surface, and having the appearance of very minute grayish grains. The symptoms are aggravated upon exposure of the eyes to the wind, bright light, dust, or by overtaking them. Relapses are frequent and can be attributed generally to one or more of the causes just enumerated. They leave the eye in a worse condition each time. The conjunctiva becomes more and more injected; the cornea becomes blurred on account of the veins becoming enlarged and extending over it. After obstinate and frequent relapses the disease is accompanied with an excessive discharge of a glutinous yellowish

matter, and a great intolerance of light—more especially if the patient is of a scrofulous habit. The lachrymation is often very great, and any attempt to open the lids causes an increase of the scalding fluid.

We often see other cases where the granules are very numerous, yet less marked by inflammation, lachrymation and intolerance of light, and I might also state, less liable to an increase of inflammation from the exciting causes. Persons of a delicate or scrofulous habit, and those who are ill-fed and the occupants of poorly ventilated and filthy apartments are more subject to the disease than others. There is no doubt but that the disease often originates among such classes, and that others become inoculated with it by washing in the same basin and wiping on the same towels used by those who have the disease. I am of opinion that there are a great many cases treated for granular lids that are nothing less than gonorrheal ophthalmia. The disease is propagated and spread in hotels and public houses mostly where there are a great many persons coming and going. Persons having a gonorrhea, after handling the organs in using a syringe, wash themselves at the general washing place and dry themselves on the towel used by all. In this way the disease is spread, and the patient not having a gonorrhea himself, the disease is then called something else, and generally "granular lids."

In the treatment of the disease we should first give especial attention to cleanliness. It is often surprising the amount of benefit that is gained by having the eye-lids well washed and the lashes cleansed of the gummy matter that holds them together, and causes so much trouble when an attempt is made to open them. I do not think it is good treatment to keep the patient confined to his room unless the weather is rough and unpleasant. The patient should take exercise morning and evening, though not long after sunset as the night air is not good.

I am opposed to the use of goggles or glasses of any color, and I never recommend my patients to use them unless necessity compels them to go out on a very bright or windy day. I am satisfied that patients will improve very much faster without the use of the glasses or goggles. Goggles generally keep the eyes too warm and cause them to become feverish; and in looking through glasses there is almost always a peculiar strain on the

eye, even if it is ever so healthy, that would not be beneficial to one already diseased.

I recommend my patients to draw their hats or bonnets as much over the eyes as possible to protect them from the bright light or strong wind. By doing this they are not obliged to go through the process of breaking off the habit of the use of the goggles which so often causes a relapse. As in all diseases of the eye there are certain general principles to be followed; and it is impossible to lay down a certain routine treatment for granular lids, for we never see two cases just alike.

If the disease is of an acute character and accompanied by much lachrymation, intolerance of light, and an elevation of the conjunctiva above the transparent cornea approaching a purulent form, we should be very careful as to the use of stimulating applications. In such cases I would recommend the dry cup to the temples frequently, and at the same time use some mild and soothing collyrium, as morphia, atropia, aa. grs. 5, to aqua rosa, ounces 2. Apply 3 or 4 times a day. Keep the bowels regular with some aperient—saline cathartics are generally very beneficial, unless there is a tendency to malarial fever, when their use should be forbidden. After the inflammatory symptoms have subsided we might aid the case materially by everting the lids, and making a slight application with the sulphate of copper. However the application should be very slight, and once a day is often enough to employ it, even if it agrees with the patient ever so well. In cases where the application causes an increase of the inflammatory symptoms of a severe form its use should be discontinued, and a mild application of a soothing nature substituted. The sulphate of copper is best suited to cases of granulation where the inflammatory symptoms are not well marked, and where there seems to be an excessive dryness of the lids. In such cases it is necessary to excite a certain amount of inflammation for the purpose of aiding in the absorption of the granules. When I find the sulphate of copper agreeing well with the patient, I use the sulphate of zinc, from grs. 2 to 5 to 1 ounce of rose water in connection with it. I use the copper in the morning and the collyrium in the evening, having 2 or 3 drops of it applied to each eye.

There are other caustics highly recommended, as the nitrate of silver, sesqui-carbonate of potash, etc., in the treatment of gran-

ular lids. I have always found nitrate of silver better suited for purulent ophthalmia than for granular lids.

In several cases of the dry granules that I spoke of, I have often found the sesqui-carbonate of potash agree when the sulphate of copper did not, and *vice versa*.

When a patient does commence improving under the application of the copper, it is apt to be more permanent and less liable to relapse than with the use of any other remedy.

Too much attention cannot be given to the general health of the patient. You cannot be too careful in your inquiries to this subject. If the patient is of a scrofulous habit, then the invigorating tonics, and good substantial food with sufficient exercise, should by no means be neglected.

Attend to the general health with such remedies as the case demands, and you will find that those cases, which have been so formidable under local applications alone, are not so intractable after all.

PROCEEDINGS OF THE NORTH-EAST INDIANA MEDICAL ASSOCIATION.

The society met on Tuesday, June 3rd, 1873, at Kendallville. Dr. Dancer presiding.

The attendance was very large—over fifty physicians were present.

The minutes of the previous meeting were read and approved.

Dr. Denny, from the committee on the diseases prevalent during the year, within the limits of the Society, stated that he was unable to make a full report at this meeting. He read a letter from C. A. Whyte, Wolcottville, giving a short history of the diseases prevalent in that vicinity. The most prominent being cerebro-spinal meningitis in the northern part of the county, and puerperal fever in the southern. Both diseases were attended with the usual ravages, and nothing new was elicited concerning their treatment.

On motion of J. L. Gilbert, Dr. Denny was requested to make a full and written report at the next meeting of the diseases prevalent in the limits of the Society. Said report to embody, as far as possible, their treatment.

Dr. Erickson, from the committee to revise the constitution and by-laws, reported an entirely new constitution and by-laws, which, after some discussion, was adopted, and a committee of three was appointed, consisting of Drs. Teal, Gilbert and Abell, to superintend the printing of the same.

A motion to rescind the fee bill of the society was carried, on the ground that the regulation of fees must be determined by each individual member.

The object of this association was declared to be the promotion of harmony and good fellowship, and the elevation of the medical and collateral sciences, not the adoption of fee bills.

Reporting cases was declared in order. Dr. Teal presented a case of spina bifida—child three months old. A week previous he had punctured the tumor, and has since applied moderate pressure. The result of his treatment will be reported to the society.

Dr. B. S. Woodworth read an essay on the use of the calabar bean in tetanus, illustrated by a case, of which he gave an extended history. The essay elicited considerable discussion, and, on motion, was ordered to be published with the proceedings of the society.

Dr. Lemon presented a patient suffering from epilepsy. He had treated the case with bromide of potassium. Dr. H. D. Wood remarked upon the case that he would continue the bromide in large doses for one, two, or three years if necessary.

Dr. B. S. Woodworth stated, after an examination of the case, that he would give the bromide of potassium a reasonable length of time; after failure of the bromide he knew of no remedy, except possibly the trephine, that would be likely to prove satisfactory. The case was of some years standing, and could not positively be traced to mechanical injury of the head.

Dr. H. D. Wood reported a case of subacute synovitis of the knee joint. It was now of over two years standing, and had been treated by a number of physicians. Extension, pressure, counter irritants, rest, etc., had been tried in vain. The joint continues very much swollen and painful, and it was believed that extension and moderate pressure, with complete rest, long continued, would finally cure the case. The case was idiopathic in its origin.

Dr. W. H. Franks presented the following case: Female, aged 58. Six months ago she fell from a porch twenty inches in height. In falling she threw out her hand to grasp a projecting ledge of ice, some feet from the porch. She failed in this and fell upon the palm of the hand, but struck her shoulder with much force against the ledge of ice. Until four days after the accident she had fair use of the arm, could exercise the usual latitude of motion, though not without pain. At this time pain increased so much that she could no longer be induced to move the arm. The pain still increasing, the doctor was called, fourteen days after the accident. He found the parts much swollen; patient feverish. Was unable to make a satisfactory examination. He prescribed anodynes, fomentations, and enjoined rest, hoping the acute symptoms would subside in a few days, when

he could renew the examination. He did not see the case again, however until a few days ago. She now suffers very much pain in the shoulder joint. There is no swelling nor any evidence of displacement. The contour of the shoulder is normal in all respects. The latitude of motion is much diminished. She is unable to put her hand upon her head or upon the back; she can barely touch the opposite shoulder with the ends of the fingers, and this with intense pain. She complains of a binding sensation near the coracoid process, which is also the seat of the greatest pain. The exact pathological condition was regarded as obscure.

Dr. Latta remarked: There probably exists a state of chronic inflammation of some of the membranes of the joint, and doubtless some inflammation of the articular cartilages. He recommended the daily use of stimulating and resolvent lotions, including iodine, with daily attempts at motion to prevent ankylosis.

Other cases were reported by Drs. Denny, Chamberlain, Cowan and Gilbert.

Dr. Latta delivered a lecture on the treatment of fractures of the thigh, illustrating his remarks with a patient and fractured he had brought for that purpose. The fracture-bed is his own invention, and is certainly a very ingeniously contrived, as well as a useful affair. The lecture showed much originality and was full of practical suggestions.

Prof. McGraw remarked that Dr. Latta's appliance for counter extension to the great trochanter was on an entirely new principle.

T. F. Wood, of Metz, read an essay upon the duties of the physician. On motion, the essay was ordered to be published with the proceedings of the Society.

The Society proceeded to transact miscellaneous business.

Election of officers for the ensuing year was declared in order.

On motion of J. L. Gilbert a committee of five was appointed to nominate three candidates for each office. The following names were reported as candidates:

For President; G. Erickson, G. W. Carr, and T. F. Wood. Secretary; J. L. Gilbert, C. A. Cowan, John Dancer. Treasurer; L. F. Abell. Vice-President; W. H. Landon, J. N. Chamberlain, C. A. Whyte, J. L. Haggerty. Censors; H. D. Wood, S. T. Williams, C. Palmiter. Dr. Erickson lead the first two ballots for President. On the third ballot T. F. Woods' name was withdrawn, and Dr. Carr was elected.

J. L. Gilbert was elected Secretary.

The other candidates were elected by acclamation.

The new officers are: President; G. W. Carr. Vice-Presidents; J. N. Chamberlain, C. A. Whyte, W. H. Landon, J. L. Haggerty. Secretary; J. L. Gilbert. Treasurer; L. F. Abell. Censors; H. D. Wood, S. T. Williams, C. Palmiter.

Professors Reed and McGraw were elected honorary members. The annual tax was then collected.

Drs. Teal, E. G. Whyte and Casebeer were appointed essayists for the next meeting.

Subject for discussion, at the next meeting, will be the mechanical treatment of uterine displacements.

On motion of Dr. D. W. C. Denny, the Secretary was ordered to publish the proceeding in the CINCINNATI MEDICAL NEWS, *Detroit Review of Medicine*, and the *Indiana Journal of Medicine*.

On motion of J. L. Gilbert, the last Tuesday of each quarter was fixed as the day of meeting, instead of the first, as has been the custom of the society heretofore.

The next meeting will be at Waterloo, on the last Tuesday of September, 1873.

The society adjourned.

Pursuant to previous announcement a large audience assembled at Mitchell Hall, at 8 o'clock. After prayer by Rev. Goodman, of the First Presbyterian church, and singing by the Kendallville Philharmonic Society, Prof. T. A. McGraw, of Detroit, delivered an address. His subject was the relation existing between the public and the medical profession. His remarks were well adapted to a public audience, and were well received. On motion of Dr. H. D. Wood, a vote of thanks was extended to the speaker.

J. L. GILBERT, Sec.

A NEW SCIENTIFIC DISCOVERY.

Dr. Ferrier, who was some time ago appointed successor to Dr. Guy in the chair of Forensic Medicine in King's College, London, has just crowned the study of years by a most happy and brilliant series of experiments. Dr. Ferrier was a successful student of philosophy, and gained the Ferguson Scholarship in Glasgow before he studied medicine. It was probably his acquaintance with Professor Bain's psychology that led him to give special attention to the physiology of the brain, and his graduation thesis on the brain, for which he obtained a gold medal, proved that he had already entered on the study in which he is destined to acquire enduring fame. He has never lost sight of the object to which he attached himself so early, and has been for a considerable time thoroughly up to the most advanced knowledge. About a month ago his plans were so far complete that he was ready to begin his experiments with the Easter holidays. By the invitation of Dr. Crichton Brown he went to Wakefield, and was amply provided with cats, dogs and other animals for his experiments. The results astonished himself, and it is not too much to say that during the last month more has been discovered regarding the action of the brain than all the preceding knowledge.

Physiology is therefore on the eve of an extraordinary advance. What Gall and Spurzheim groped after in a loose and empirical fashion is now established on the sure ground of experiments. The *modus operandi* is new and ingenious. The animal to be experimented on is first put under chloroform. The next thing is to clear away the skull and expose the brain. This, it will be understood, is a difficult and delicate operation, but is done, and the animal may live from three hours to four days. All this has been done often enough before, but the difficulty was to get some mode of rousing parts of the brain into activity without injuring the parts. The process employed by Dr. Ferrier is what is known as faradizing. After uncovering the brain, he applies the point of an electrode to the convoluted of the brain. Its effect is to excite the functional activity of that part, and thereby to show what its real work is. One of the first experiments disclosed the part that is employed in wagging the tail. Soon after the centres engaged in supplying the limbs, the mouth, head, etc., were discovered, and already Dr. Ferrier has succeeded in almost completing a map of the brain with all its organs, distinguished by the sure and rigorous test of experiment. Nothing could surpass the interest of those experiments. On the table before you is the dog, with its skull removed. All seems, but for the breathing and movement of the brain, an inert mass of dead matter. The doctor applies the electrode, and presently the tail begins to wag. All else is motionless. Another touch, and its forepaw is stretched out; another, and its head is erected; another, and its mouth opens.

Again the magic wand touches the brain, and the animal seems convulsed with fear and rage, and so on the experiments go. Once the divining rod has been discovered it is comparatively easy for an expert visicator to use it. This discovery, so simple once it is known, will effect almost a revolution in physiology. One of the chief results attained by Dr. Ferrier, is the belief that each convolution is a separate organ, although occasionally several may be conjoined for common work. He also finds that the great motion centres are collected in the front part of the brain—a result that shows the phenologists were not far out in that quarter. It has also demonstrated that the nervous centre moving the muscles of the jaw are just above the ear, where the phenologists place gustativeness. But other experiments make sad havoc with the locality of many of the “bumps.” The most singular of all the experiments is one proving that one of the main uses, if not the sole one, of the cerebellum is to supply the muscles of the eye. This is an extraordinary confirmation of one of Professor Bain’s most characteristic views. But the most important immediate effect of Dr. Ferrier’s discovery will be an improved treatment of diseases of the brain. It has found out why considerable portions of the brain may be diseased without in-

terfering with sanity, and why other slight lesions produce epilepsy. It has succeeded in artificially producing epilepsy in a dog. This is a most wonderful part of the discovery, and proves the truth of the conjecture of Dr. Hewlings Jackson, that epilepsy arises from a lesion between two convolutions of the brain. Dr. Ferrier has also found out the origin of chorea or St. Vitus' dance, and has been able to make his animals show all the symptoms of the disease artificially. He has caused tetanus and other peculiar and difficult states of the muscular system. Curiously enough, Dr. Ferrier's discovery coincides with another almost essential to its practical successs. Anatomists have warned phrenologists that they erred in taking the outward shape of the skull as indicating the shape of the brain. The skull varies considerably, and it is impossible to say of any particular part that the brain is such or such a distance below. Nevertheless, a young anatomist has recently shown that there is a relation between the shape of the skull and of the brain, and that it is possible to know what it is in the inside of the head without breaking it open. This is most opportune, for when Dr. Ferrier has mapped out the brain it will be possible to diagnose a man's faculties as easily as tell his shape. We are glad to learn that at the instance of Professor Huxley, the Royal Society has come handsomely forward and voted a grant to Dr. Ferrier to carry out his experiments on monkeys. The monkey is the nearest approach to man in the animal kingdom, and as it is of course out of the question to experiment on men, the monkey will form an adequate substitute. Altogether it is likely that Dr. Ferrier's discovery, beyond any discovery of the present generation, will enlarge the circle of human knowledge, and contribute to the happiness of mankind.—*Dundee Advertiser's London Correspondent*, June, 1873.

GLEANINGS FROM HOSPITAL PRACTICE--GUNSHOT WOUNDS OF THE HEAD.

By H. D. WOODBURY, M. D.

During my services as a member of the medical staff of Armory Square General Hospital in 1864 and 1865, I met with many novel and interesting cases of gunshot wounds. It has been my purpose to publish a brief history of some of these, but other demands upon my time have prevented me from so doing. As our hospital was located only a few blocks from the steamboat wharf, we received a majority of the worst cases.

CASE I.—In 1864, Major H., of a New York regiment, was brought into my ward wounded. A bullet from a carbine or navy revolver struck the dorsum of nose at a point about one inch below its summit and passed into the head and brain. I

did not deem it expedient to probe this wound to any great extent, but satisfied myself, by passing a silver sound for about two inches into the opening (which was very small), that no spiculæ were present. At least I could detect none. I applied a cold-water dressing, ordered "special diet," and pursued the expectant plan. After a few days there was a somewhat offensive discharge from the nostrils, for which antiseptic injections were used. The patient was a man of great determination and of strong constitution. In a few weeks his wound healed, and he desired to walk about the ward. On making the attempt, he found that he could not stand without assistance, and, even when supported, he had lost the power of locomotion to such an extent that he could not take one step. This was the interesting phase in his case.

I at once ordered strychnia with dilute phosphoric acid, and directed him to renew his attempts to walk daily. In about one week he had so far recovered the use of his limbs that, by taking hold of the wire by which the musquito-nets were suspended, he could shuffle himself across the ward. From this time he continued to improve, until at length he had gone through the process of learning to walk, if so I may express it.

He left for his home, on furlough, after having been a patient about two months, and on his return, sixty days after, he had gained so much that I did not recognize him. "Doctor, you do not remember me," he said, pointing to a very small scar on his nose,—when I at once called him by name. He then informed me that his wound had caused no trouble during his absence, that his health had never been better, and that he was on his way to duty; "to take another chance at them." I have never seen him since.

In this case, I have no doubt, the ball penetrated and was lodged in the cerebellum, causing, by the irritation it produced, temporary paralysis of that portion of the brain. During the entire course of treatment there were no other indications of cerebral derangement,—no delirium—and very little, if any, febrile excitement.

CASE II.—Private B., admitted from the army of the Potomac, in September, 1864. A fragment of shell struck him on the forehead, cutting away a portion of the cranium (frontal bone), and leaving the brain exposed and lacerated. The wound was nearly oval in shape, and included the upper third of the forehead, extending backward nearly to the coronal suture. When brought in, he was in a comatose condition, from which he never rallied. Cold-water dressings were applied, and frequently changed. On the third or fourth day after admission, while the dresser was changing the lint, a fearful hemorrhage ensued. He at once called me, and I took up the meningeal artery and ligated it. I reported the fact to the surgeon in charge. "It will do

no good, doctor," he replied, "for sloughing will take place, and your man will die from hemorrhage." His prediction was not verified, as the patient lived forty-eight hours, and then died without having lost another drop of blood,—probably from nervous exhaustion.

CASE III.—Private G., admitted November, 1864, from the army of the Potomac, with gunshot wound of the head. A minie-ball struck the frontal bone at a point about one and a half inches in front of the coronal suture, and an inch to the left of the median line, cutting a neat furrow from two to three inches in length, and leaving the brain exposed. Cold-water dressings were ordered, with light nourishing diet, and perfect quiet. In a few days profuse fungous granulations made their appearance in the wound. These I clipped off with the scissors, and touched the parts from which they sprang with nitrate of silver. A healthy action speedily followed, and after a sojourn of six weeks in the hospital the patient left, apparently as well as ever, for a visit to his home.

My experience and observation in the service convince me that, as a general rule, the probing of gunshot wounds of the head is inadmissible. In short, in all cases of gunshot wounds, the less we use the probe the better. In 1863 I saw in Seminary Hospital, Georgetown, a German who had received a ball (probably a round one from a smooth-bore) in the temporal region just in front of the ear. Two medical officers were present with me at the time. We each in turn examined the wound with the little finger. This was passed in its entire length. No probe or sound was used. The water dressings were applied, and in thirty days to our surprise, the man was fit for duty. I have no doubt a moderate amount of probing would have produced a very different result in this case.—*Medical Times*.

BABIES AND BEEF-TEA.

We have long thought that the statistical patriots were on the wrong track in their perennial lamentations over the decadence of our native population, in so far that they are continually urging for the birth of more children. From our point of view it is much more decisive in the increase of a people how many infants live than how many are born. Moderate-sized families of strong, healthy, well-trained children we hold to be of much more value to the state than great litters of undernourished babies,—early candidates for the grave-yard.

It is, therefore, with great pleasure that we see our Obstetrical Society, instead of fulminating anathemas, devoting its attention to the reduction of infant mortality. Under its direction there have been recently issued special rules for the management of

infants during the hot season, in a little pamphlet, which ought to be, and we believe is to be, scattered broadcast throughout our city. When the summer's season is fairly upon us, we hope the committee will see that the rules are published in at least one of our daily papers.

The rules themselves are excellent, and worthy of the array of names by which they are signed. Unfortunately, in one of a series of receipts added to them there is a very serious misstatement, which, as it supports a popular error, and relates to an intensely practical point, suggests a comparison between the committee and the famous cow that gave a good pail of milk, etc.

We not propose to insult the intelligence of our readers by offering proof that beef extract and beef-essence contain at most only a homœopathic allowance of nutriment; yet constantly mothers, nurses, and we may add, even doctors, are dosing with these preparations children and adults, under the delusion that they are feeding them,—a delusion which is already sufficiently chronic in most of the individuals afflicted thereby, but which we fear will be rendered hopelessly incurable by the assertion of this learned committee that beef-tea, when made in accordance with a certain receipt, contains the whole nourishment of the beef. There is undoubtedly a difference between beef-tea and beef-essence; but, as this is not distinctly stated in the pamphlet of the Obstetrical Society, the assertion alluded to will certainly confirm error in the mind of the popular audience to which the rules are chiefly addressed.

More to the point, perhaps, is the fact that the statement of the committee is very far from being true as regards beef-tea. The receipt may be found in another column of our issue. It is very evident that, when beef-tea is made in accordance with its directions, only such matters as are soluble in water are extracted from the meat, the fibrin, the muscular fibre, etc., being left behind, whilst the kreatinin, carnin, and other innutritious products of destructive metamorphosis, with the inorganic salts, are dissolved.

It is equally evident that the only nutriment contained in this obstetrical fluid is albumen. We have had a pint of the beef-tea carefully prepared according to the receipt of the committee, and on adding to it nitric acid obtained precisely one hundred and ninety-one and a half grains of precipitate. The truth of the following formula consequently rests upon the official declaration of the Philadelphia Obstetrical Society: Albumen 3iij = beef one lb.

We do not mean in any sense to deny the value of beef-tea when properly used. We do mean to insist that as a food it is an extremely wasteful preparation, and that to tell the poor of the community that they are giving to their children all the nourishment of the beef in giving beef-tea is to practice unwittingly a great fraud upon them.

Moreover, we desire to call the attention of physicians to the fact that beef-tea contains so much potash, that when given in large quantities it is a medicinal agent, and can only be intelligently employed with a direct appreciation of this fact.

According to Lehman's analysis, a pound of beef contains about forty grains of potash; and, as this is all extracted by the water, the beef-tea of the society contains at least one-fifth as much potash as albumen.—*Medical Times*.

MEDICAL GLEANINGS.

ON THE USE OF ARTIFICIAL RESPIRATION AND TRANSFUSION AS A MEANS OF PRESERVING LIFE (*British Medical Journal*, May 17, 1873).—Dr. T. Lauder Brunton, of St. Bartholomew's Hospital, presents, in an interesting and valuable paper, a review of various important physiological experiments and observations, and shows how they may be utilized in the treatment of disease. Quoting Huxley, he says, "Life has but two legs to stand upon—the lungs and the heart; for death through the brain is always the effect of the secondary action of the injury to that organ upon the lungs or the heart." The experiments of the Abbe Fountana Legallois and Brown-Sequard have shown that headless trunks, isolated portions of the body, or the head alone, may be kept alive, or even restored to life, by a proper supply of oxygenated blood; and not only have nerves and muscles been made to retain vitality, but livers have secreted bile and lungs excreted carbonic acid hours after they were excised from the body.

A point of great practical importance is, that the parts do not all die at the same time, and, as the brain and spinal cord generally die first, the heart may pulsate regularly after all respiratory movements have ceased, and consciousness and reflex action are entirely lost. If, under such circumstances, respiration be kept up artificially, the heart continues beating, and the circulation of arterial blood though the brain may gradually restore its power, respiration re-commence, and life be securely re-established. Schiff's experiments have demonstrated that animals may be kept alive, after almost entire destruction of the medulla, or after the injection of water under high pressure into the cranial cavity. Hence it is evident that we may hope for the best results from the use of artificial respiration in some of those cases of apoplexy where an extravasation almost instantly arrests the respiratory movements, either directly, by destroying a part of the medulla, or indirectly, by causing compression of the brain.

In poisoning by woorara, hydrocyanic acid, strychnia, etc., as well as by the bites of snakes, artificial respiration is invaluable as the only means of affording time for the excretion of the toxic agent. Where the poison exists in large quantities, or is excreted very slowly, requiring hours or even days before it can

he got rid of, the obvious plan of treatment would be to remove the poison along with the blood in which it is circulating, instead of waiting for its slow removal by the emunctories; and here transfusion comes to the aid of artificial respiration.

Dr. Brunton details some cases where this method of treatment was followed by almost veritable resurrection. Alluding to the objections raised by Larry to the employment of lambs' or calves' blood when human blood cannot be obtained, he states that there is no physical reason why it should not be used, and concludes by remarking that "the risk of injuring a man's character, or that of his descendants, by transfusion of an animal's blood, is not for an instant to be weighed in the balance against the chance of saving his life in those cases where alone the operation would be performed.

CHANGES PRODUCED IN THE LIVER BY A HIGH TEMPERATURE (*Lancet*, May 17, 1873).—At the regular meeting of the Pathological Society of London, Dr. Wickham Legge exhibited some microscopical sections of the liver of rabbits killed after an exposure of from six to twelve hours to a temperature of 105 deg. In all the animals the livers were found very dry, but little blood exuded from a cut surface, and the acini were indistinct. The liver-cells were filled with fine granular contents, so that in some cases the nucleus was invisible. Dr. Legge remarked that it was well known that parenchymatous degenerations of the liver were far more common than was formerly supposed. Excluding phosphorus-poisoning, acute yellow atrophy, and cases akin thereto, this finely granular condition of the cells had been chiefly met with where a high temperature had been noted; but no experimental proof whatever had existed that it was due to this cause. The cloudy swelling of the kidney in febrile diseases had long ago been noticed; but probably in patients dying from diseases attended with high temperature the liver suffers far more than the kidneys, and far more commonly.

CORRESPONDENCE.

THE CINCINNATI HOSPITAL.

PROF. THACKER:

Dear Sir,—Your correspondent M., in the last number of the *News*, disputes the accuracy of my statement about the position of the faculty of the Medical College of Ohio in regard to the legislation, which was intended to fix more permanently the government of the Cincinnati Hospital; but as the bill failed to become a law, and as it will not be presented to the legislature again, it has ceased to be a subject of controversy. That it did fail is fortunate, not only for the peace of the profession, but for the hospital itself.

In answer we will say that we have at no time advocated the passage of this bill, nor have we commended the act which brought the hospital before the courts. But, on the contrary, we have denounced

the bill as full of elements of strife. We did this at Columbus before the House committee, to which it had been referred, and at the same time we censured the action of those who had made the hospital the subject of litigation. We said to the committee that the Cincinnati Hospital had by turns been controlled by strong medical college factions, that had monopolized its clinical advantages, and used them for self-aggrandizement; that these factions were playing a game for the possession of their former monopoly—the one expecting to win through the courts, and the other through the legislature; that no good could come to the hospital from the passage of the bill, nor from any decision the court might make. We urged upon the committee the necessity of defeating the purposes of both of these factions by repealing all laws in relation to the hospital, and then creating for it a government, clearly defining the powers of the Board of Trustees. We said to them that it was of the highest importance for the peace of the profession, upon which the prosperity of the hospital depends, that the Board of Trustees should have no discretionary powers in relation to selections for the hospital staff from medical college faculties. The law should compel them to exclude from the staff all medical college faculties, or, on the other hand, compel them to select a like number from each one of the faculties.

We are now well aware that the faculty of the Medical College of Ohio did use their influence with members of the House to defeat this bill; but, while this is true, we are very sure that they did agree to its passage in the Senate; and no one who will read Dr. Uptegraft's language at the time he presented the subject to the Senate can escape this conviction. That Drs. Bartholow and Graham, their representatives, did agree to its passage there is no doubt. Here is a contradictory course of conduct which is in complete accord with the history of the Medical College of Ohio for the last twenty years, and which is in complete harmony with the character of the gentlemen who appeared before the Senate committee. What more, we ask, could be expected from Bartholow? Has he not been denounced as a professional trickster? and was he not convicted by Blackman of a literary larceny? And what more from Graham? Was he not denied the privilege of resigning his place in the faculty of the Cincinnati College of Medicine and Surgery, his colleagues claiming the right to expel him from their number? and has not the under-current of his nature always been marked by incongruity and selfishness?

As an apology to the profession for what we write we must say that our sense of justice has so often been outraged at the conduct of these Bartholows and Grahams of our profession, that it is difficult to refer to them without animadversion. They disregard the code of medical ethics, and rush into the secular press for the assumed purpose of defending themselves against assaults from others, which assaults in many instances are purely imaginary. Any one can see that the real object of this is to gain notoriety by means of cheap advertisement.* The same object is gained by this class of individuals by means of sensational paragraphs in the daily papers, such as the one about cholera which appeared a few days since, making conspicuous the names of Drs. Bartholow, Conner and Whittaker, all of the Ohio faculty. We refer to this college in connection with these men, not because we have any personal controversy with them, but because

* See Bartholow versus Comegys.

they are the master spirits and the representative men of the Medical College of Ohio as it exists to-day. This institution, which in the early days of medicine in Ohio, was a tower of strength, grand and noble, has, within the last twenty years, become fearfully demoralized; so much so that there is no standpoint from which it can be viewed with admiration by any one who has the least regard for the principles of justice and right. View them as the guardians of a public trust: It is known to many that the Medical College of Ohio is the only medical college in the State which has received a bequest from the legislature. Where is the bequest now? Squandered, and the college, unlike any other in Cincinnati, and perhaps the State, is compelled to hold its sessions in a rented building. Even the lot on which the hospital now stands, by the merest accident, was saved from a like fate.

Again, view them as honorable men and competitors. It will be remembered that about 1857 a union was effected between the Medical College of Ohio and the Miami Medical College of Cincinnati. By the agreement a part of each faculty was to go into the new organization under the name of the Medical College of Ohio, and the Miami charter was to be abandoned. It was also agreed that each one of the alumni of the Miami College should receive the Ohio Medical diploma. Harmony prevailed in the new organization until the alumni of the abandoned school had become graduates in the Medical College of Ohio. Soon after this difficulties began to arise in this new organization, which ripened into hostilities, and ended in the ejection of Drs. Mendenhall, Murphy, and, indeed, all the members of the faculty from the dead Miami school. The Miami organization, destroyed by this trick, and its alumni appropriated, the next move was to get out of the way the Cincinnati College of Medicine and Surgery, which at the time was the only competitor for professional patronage in Cincinnati. Being by law the medical staff in the Commercial (now Cincinnati) Hospital, their first effort was to compel the students from the Cincinnati College to matriculate in the Medical College of Ohio before they could procure the hospital ticket. This insulting proposition was rejected, and the controversy which followed ended in reducing the faculty of the Medical College of Ohio to an equality in clinical teaching in the hospital with all other medical college faculties. At another time, after the Cincinnati College of Medicine and Surgery had sent their annual announcement to the profession, advertising the fees at \$105, the Medical College of Ohio reduced theirs from \$105 to \$90, and again from \$90 to \$60. This is the origin of low fees in Cincinnati.

Look at them as high-minded, medical gentlemen and good citizens of Cincinnati. A few weeks since the faculty of this institution, in a manifesto, published in the city papers, profess to care but little about the clinical advantages of the Cincinnati Hospital for their college. They had caused writs of injunction and *quo-warranto* to be issued against the trustees of the hospital in the interest of the tax-payers of the city. But here again their action contradicts their professions. For about eight years past they have, as far as possible, withheld all support from the Cincinnati Hospital. Within that time they have diverted some twenty-five hundred dollars from the tax-payers' hospital to build up a private one, in which the tax payers have no interest. They deplore the low order of talent engaged in clinical teach-

ing in the hospital, but is it not apparent that they do so for the purpose of damaging the tax payers' hospital, and thereby promote their selfish purposes? The remarks of Drs. Bartholow and Graham before the Senate committee at Columbus, and Dr. Whittaker's abusive paragraph in the *Clinic*, and repeated in the daily papers, about Dr. Miller of the hospital staff, are ample proofs of the correctness of this charge.

In their public declarations they profess great desire to elevate the moral standing of the profession, and to maintain it on an elevated plane, but their official acts show that they open wide the portals to the profession and admit to collegiate honors those who have never attended a course of medical lectures, and at the time of graduation belong to the quack nostrum-venders of the country. We now refer to that class of persons of which Edward S. Wayne, of Wayne's Diuretic Mixture, one of their last graduates, is a representative. The pretentious declarations of this newly made M. D. by the Ohio College are scattered in circulars and handbills everywhere. They eclipse anything ever said by Jayne, Roback, Kerr, and others, who have, from time to time, preyed on popular credulity.

In conclusion we will say, that if this Medical College of Ohio has on record a single act of these master spirits—these representative men—these Bartholows and Grahams—which shows that its faculty has, at any time within the last twenty years, possessed high professional honor, or has, within that time, given evidence of generous competition in teaching, or a single page of its history that does not contain an account of some internal commotion or a disposition regardless of the means used to destroy all competition, we will be glad to have any member of the present faculty to point it out.

Respectfully,

R. C. STOCKTON REED.

Jones' Station, O., June 15, 1873.

Book Notices.

THE MINERAL SPRINGS OF THE UNITED STATES AND CANADA, with Analyses and Notes on the prominent Spas of Europe, and a list of Sea-side Resorts. By GEO. E. WALTON, M. D., of Cincinnati. 12mo. Pp. 390. New York: D. Appleton & Co. Cincinnati; George E. Stevens & Co. 1873.

In this volume the author has, as he states, endeavored to arrange all the known facts concerning mineral waters in such manner that they shall be readily accessible. For this purpose he has consulted the best European authorities, their conclusions being drawn from hundreds of years of laborious investigation of the spas of Germany, France, Switzerland, and Italy. The portion relating to the springs of the United States is the result of a selection of credible evidence regarding them, gained by correspondence and personal observation.

The work contains nineteen chapters, and is as complete in its information in regard to mineral springs as could be desired. The first chapter is historical, giving an account of the mineral springs of ancient Greece, Italy, the Roman baths, etc. The second chapter is

descriptive of mineral waters, giving the definition of mineral waters; describing pure water, river water; stating the analysis of rivers; discussing the physical characteristics of water—color, odor, taste, temperature, electricity, magnetism. After this we have treated the therapeutic action of ordinary water; and then, after that, at length, the therapeutic properties of mineral waters.

We have no doubt the profession will find this a highly satisfactory work, containing information that cannot be readily obtained elsewhere.

ON THE TREATMENT OF DISEASES OF THE SKIN, with an analysis of eleven thousand consecutive cases. By Dr. McFALL ANDERSON. Svo. Pp. 84. Philadelphia: Henry C. Lea. 1873.

The object of this work is to afford statistics of 10,000 consecutive cases of skin disease met with in hospital practice, and 1000 consecutive cases met with in private practice, to compare the results, and to allude to a few of the more interesting cases.

The diseases of the skin are divided into two great classes, namely: A, functional, and B, organic. The organic are subdivided into two great classes:—1. Those defined by uniform causes; 2, those not defined by uniform causes. The diseases defined by uniform causes are arranged under four heads, viz.: 1, parasitic affections; 2, syphilitic affections; 3, strumous affections; 4, eruptive fevers. The diseases not defined by uniform causes comprise all affections of the skin not included in any of the preceding groups, and are arranged pathologically under three heads, namely: 1, inflammations; 2, new formations; 3, hemorrhages.

We have no doubt the work, though of small size, will be regarded a valuable addition to the literature upon skin diseases.

A GUIDE TO URINARY ANALYSIS, for the use of physicians and students. By HENTY G. PIFFARD, A. M., M. D., Physician to the Charity Hospital, to the N. Y. Dispensary for diseases of the skin, etc. Svo. Pp. 88. New York: Wm. Wood & Co. Cincinnati: Geo. E. Stevens & Co.

The writer ventures to offer this little work to physicians and students in the hope that the simple and easy manipulations described may encourage the more frequent and more thorough investigation of the urinary secretion. Availing himself largely of the materials scattered through different treatises upon the subject, his aim has been to reduce them, as far as practicable, to a uniform system of manipulation, to simplify the calculation of results, and to arrange and modify the necessary apparatus, so that the various operations may be conducted speedily, accurately, and at slight expense.

The work will undoubtedly be regarded as a highly useful one.

Editorial.

THE CHOLERA.—This disease is said to be existing in this city at the present time of writing, and from ten to fifteen are reported as dying from it daily. Whether it be true or not that *genuine* cholera is prevailing here we do not care at this time to discuss at length. We will

say, however, that so far as our personal experience extends, it is wanting markedly in a number of features possessed by the disease in past epidemics. In every case we have met with, and we have treated not a few, the attack could be clearly referred to either imprudence in eating or drinking, or exposure of some kind or other. The cases, too, almost without exception, have responded promptly to treatment—such treatment as is usually made use of in cholera morbus, as calomel, opium or morphine, astringents, stimulants, etc. When this has not been the case, it has generally been when there has been gross neglect in seeking medical aid, or where the patient has been of debilitated constitution. Again, the disease is not exotic in its origin, but undoubtedly originated in this country. It commenced in New Orleans, where it soon ceased, and then appeared at Memphis, Nashville, and other points in the south. All previous epidemics have gotten their start from cases brought to this country from Europe in ships.

Lacking, as it does, in a number of important features characteristic heretofore of Asiatic cholera, it is doubted by very many of our physicians, that the disease prevailing at the present time in Cincinnati, is really cholera. Aitkin states that the doctrine now generally accepted regarding the pathology of cholera is, "that a poison *has been absorbed*, and infects the blood; that, after a longer or shorter time, it produces a primary disease of the blood; that it undergoes enormous multiplication in the living body of the cholera patient, as a result of the morbid process so established; and that changes are induced in the function of respiration consequent upon this alteration of the blood by the poison." Niemeyer says that all the cholera epidemics occurring among us are due to the exotic parasite being brought to us by cholera patients, and finding for a time a suitable soil and favorable circumstances for increasing; that the vehicle of contagion is not, as in the acute exanthemata and exanthematic typhus, the exhalations from the skin and lungs, but the dejections of cholera patients. Now we do not think that any of the cases of the disease occurring in Cincinnati at the present time need, in explanation of their cause, that the blood has been poisoned by germs floating in the atmosphere, or by parasitic animals having found their way into the system through the dejections of cholera patients. We think, so far as our observations extend, that pretty nearly all the cases can be readily accounted for in the imprudence of the patient in diet, with probably a more than ordinarily debilitating condition of the atmosphere existing. In 1866, individuals were known frequently to be attacked with pains and cramps in the stomach and bowels, pass rapidly into collapse with but very little loss of fluids, and rapidly sink and die. The physician, then, could not help but feel that something more than irritating ingesta of the intestinal canal ailed his patient—that some most malignant poison had seized upon the blood and the great nervous centres, and that the result of the terrible contest between it and the life of his patient depended upon the strength of the latter to hold out until the former exhausted itself, and that his medicines were of but little avail.

In our opinion the fact of the existence of vomiting and purging, with rice water discharges and cramps, is not sufficient to make out a case of genuine cholera, but the nature of the *materies morbi* must first be definitely settled by other phenomena. Asiatic cholera attacks rich and poor, high and low alike. It enters the hovels of the poor and the palaces of the rich. While it is held that imprudence in diet and bad hygienic conditions favor it, yet it is in nowise dependent upon such. In fact, it not unfrequently happens that the most robust and careful are seized and die, and the enervated and incautious escape. The facts in regard to the disease are, that it is produced by a *specific poison*, which must enter the system before it can be brought about, and when

it has made a lodgment, no difference whether the person has previously been prudent or imprudent, is healthy or unhealthy, the disease is developed. Of course the better the condition of the patient the better the chances of recovery; but no high state of health will ward off an attack when once the system has become contaminated.

Cholera spreads rapidly, and spreads from where it originated. When a case has occurred others may be expected to follow immediately after in the same neighborhood. It gives plausibility to Niemeyer's theory, and that of others, that the dejections of the patient contain the cholera poison from the fact that those who are so situated as to be most exposed to be contaminated by them are the ones who are apt to be the next victims of the disease; thus showing a connection between succeeding cases. The so-called cholera we are having in Cincinnati has not spread by any means in a manner as would have been supposed it should if produced by the causes set down by eminent etiologists as the causes of Asiatic cholera. It does not travel from neighborhood to neighborhood, but the cases, with but few exceptions, are solitary and distant.

But we do not propose at this time, as we have stated, to enter at length into a discussion as to whether the disease now prevailing in Cincinnati, resembling, in some respects, cholera, is *genuine* cholera. We do not believe it is. It displays too few of the phenomena of a disease produced by a specific poison. Real cholera, says Sir Thomas Watson, writing since the epidemic of 1866, "results from a material poison, which is portable, capable of being conveyed from place to place, and communicated from person to person, or from inanimate substances to which it clings, such as articles of furniture or clothing,"—but our disease exhibits no such characteristics.

CINCINNATI COLLEGE OF MEDICINE AND SURGERY.—This institution will begin its thirty-fifth course of Lectures, Wednesday, October 1st. There are fine prospects of a large class in attendance. The last course of Lectures closed the 19th of June, graduating a class of twenty-eight gentlemen.

Announcements are now ready, and can be had of any of the members of the faculty.

HEREDITARY DISEASES.—We desire to call the attention of our readers to the paper on this subject by Dr. NATHAN ALLEN, of Lowell, Massachusetts, read before the Massachusetts State Medical Society, published in this number of the MEDICAL NEWS. It is an able one, and will be found highly interesting.

AN ALUMNAL ASSOCIATION, composed of the graduates of the Cincinnati College of Medicine and Surgery, has been formed, and the following officers elected for 1873-74:

R. C. S. RRED, M. D., *President*

M. L. AMICK, M. D., *Secretary and Treasurer.*

Admission fee, \$5.00.

The Association will issue to each of its members a fine diploma. Graduates of former years desiring to become members can do so by forwarding the admission fee to the Secretary, Dr. M. L. Amick, 1034 Central Avenue, Cincinnati, Ohio.

The Association will meet twice annually, on the evenings before the College Commencements in March and June.

CINCINNATI COLLEGE OF MEDICINE AND SURGERY—This College held its thirty-fourth annual Commencement Exercises Thursday evening, June 19th, 1873, in the Amphitheater of the College Building, 164 George street. The Board of Trustees, Faculty, and the class with a brilliant audience of friends and invited guests, and members of the press, met at 8 P. M. The following was the programme of exercises:

Prayer by the Rev. D. H. MOORE.

Report of the condition and progress of the College by the Dean of the Faculty, Prof. D. D. BRAMBLE, M. D.

Remarks and conferring of Degrees by the President of the Board of Trustees, the Rev. F. S. HOYT, A. M., D. D.

Valedictory address to the graduating class by Prof. J. B. A. RISK, M. D.

The following is a list of the graduates. Those with a star attached to their names, applied for, and having passed a successful examination in, Dental Medicine and Surgery, were awarded diplomas to that effect by L. P. MERIDITH, M. D., D. D. S.

Names.	Thesis.
*BANNING, A. T., New York.....	Displacements of the Uterus.
*BARNSFATHER, JAMES, Kentucky.....	Peritonitis and its Treatment.
BULLOCK, A. W., New York.....	Fractures of the Patella.
BRAWLEY, M. A., Ohio.....	Aneurisms
*BALLARD, A. B., Indiana.....	Cerebro-Spinal Meningitis.
*CANNY, W. W., Ohio.....	True System of Medicine.
CHIDESTER, T. J., Ohio.....	The Accoucheur.
*CUMMINS, J. V., Ohio.....	Functional Disorder of the Heart.
*DAVIS, R. P., Indiana.....	Spermatorrhoea.
*DEATON, Van. S., Ohio.....	Cerebro-Spinal Meningitis.
*FIELD, EDWARD, Kentucky.....	Tuberculosis.
*FIELD, J. H., Ohio.....	Acute Peritonitis.
HARRIS, R. O., Illinois.....	Cholera Infantum.
HELMS, T. O., Ohio.....	Fractures of Clavicle.
HUNT, J. M., Ohio.....	Typhoid Fever.
LOWREY, J. T., Arkansas.....	General Debility.
LAYTON, CHAS. W., Kentucky.....	Pneumonia.
MAY, J. B., Ohio.....	Pluritis.
MCCULLOUGH, W. H., Ohio.....	Scarlatina.
MCKINNEY, A. R., Illinois.....	The Uterus.
*MEANS, W. J., Ohio.....	Puerperal Fever.
PEARSON, H. J., Ohio.....	Food.
RAWLINGS, S. O., Indiana.....	Femoral Hernia.
*SMITH, H. P., Illinois.....	Cerebro-Spinal Meningitis.
*STERRETT, S. A., Ohio.....	Leuchorrhoea.
*THOMASON, B. R., Tennessee.....	Malaria.
WRIGHT, JOHN W., Ohio.....	Science of Medicine and Surgery.
Ad Eundem I. N. JONES, Ohio.....	Calomel vs. Podophyllum.

INTERNATIONAL MEDICAL CONGRESS.—The third meeting of this body will be held at Vienna from September 2nd to 10th, 1873. The Executive Committee consists of Profs. Rokitsansky, Sigmund, Hebra, Benedikt and Schutzler. The meetings are to be free to all members of the profession who forward their names. The committee has selected the following subjects, upon which reports will be presented for discussion: Vaccination; Quarantine and Cholera; Prostitution; Sanitation of Towns; International Pharmacopeia; Uniformity of Medical Education. Other subjects may be introduced on notice to that effect being forwarded before May 1st. The language is to be German, but

the use of other languages will be allowed during discussions, and translations of official addresses and documents will be given.

AMERICA MEDICAL ASSOCIATION.—The following are the officers for the present year: President, Dr. J. M. Toner, District Columbia; First Vice-President, W. T. Gadbury, Mississippi; Second Vice President, J. M. Keller, Kentucky; Third Vice-President, W. C. Husted, Missouri; Fourth Vice-President, L. D. Warner, Massachusetts; Treasurer, Dr. Caspar Wistar, Philadelphia; Librarian, Wm. Lee; Committee on Libraries, Johnson Elliott; Secretary, Theodore A. McGraw. Detroit is the place of next meeting, to be held on the first Tuesday in June, 1874.

BALTIMORE AND OHIO R. R.—Those of our readers who travel, and we presume all travel more or less, should read the advertisement of this road. Those desiring to visit New York, Philadelphia, or Boston, by taking this route, have the opportunity also of visiting Baltimore and Washington City in addition without additional charge. This road runs Pullman's Palace Sleeping Cars, and affords travelers, in all other respects, all the conveniences and comforts of the best manned roads. The scenery which is witnessed on this road, in passing through West Virginia, is said to be the finest in the world.

Passengers going over the B. and O. road take the Marietta and Cincinnati road to Parkersburg, which has its depot in this city on Plum Street. Far less accidents take place on these two roads than on any other roads in the country. While we hear almost daily of fatal occurrences on other roads, we seldom hear of any on the B. and O. R. R., or the M. and C. R. R.

INSTRUMENTS.—Surgical, and instruments of all descriptions, can be procured through us. We take especial pains to select the best at as low rates as can be purchased anywhere in the United States.

We have a number of excellent microscopes on hand, that are well suited to all the wants of physicians, and cheaper than can be procured anywhere else.

AS INDICATING the growing attention the subject of hygiene is receiving, not only from the public, but from the medical profession, we are glad to see that *The Practitioner* (Macmillan & Co., London and New York,) is to be enlarged by the addition of a department devoted to Public Health. The forthcoming number will contain, under this head, articles on Sanitary Organization in England; the Health Aspects of Sewage Irrigation; the Propagation of Typhoid Fever by Milk; International Hygiene in relation to Plague and Cholera.

THE NATIONAL PUBLISHING Co. will soon publish "The Undeveloped West, or Five Years in the Territories,"—being a description of that vast region between the Mississippi and the Pacific; its resources, climate, inhabitants, natural curiosities, etc. etc; life and adventure on prairies, mountains, and the Pacific coast; with two hundred and forty-four fine illustrations, from original sketches and photographic views, of the scenery, cities, lands, mines, people, and curiosities of the Great West. By J. H. BEADLE, Western Correspondent of the *Cincinnati Commercial*, and author of "Life in Utah," etc.

PHYSICIAN'S LOCATION.—Dr. J. A. Bland, of Scipio, Indiana, still offers his location for sale. We understand that it is a desirable one. Inquiries should be addressed to him.

THE CINCINNATI MEDICAL NEWS.

VOL. II.

CINCINNATI, AUGUST, 1873.

No. 8.

HYSTERICAL ANOREXIA.

Par le Dr. CH. LASEGUE. Translated from the *Archives Generales de Medicine*, by THOMAS C. MINOR, M. D.

It is my opinion that we can only succeed in forming a history of hysterical affections by studying separately each of their symptomatic groups; after this work of analysis, we should gather the fragments together and re-form from them the entire disease. Viewed in its *ensemble*, hysteria has too many individual phenomena and hazardous difficulties for us to seize the particular one in general. This plan, more than disputable if we apply it to diseases limited as to time, space, and locality, and as to the modality of phenomena, here finds its legitimate employment. I long since sought to give the characteristics of the cough and transient catalepsy noticed in some hysterical cases. Other authors have dedicated valuable memoirs to the hemiplegias, transitory or durable contractions, anesthesia, etc. I intend to speak to-day of a symptomatic complication observed so often that it cannot be an exceptionable symptom, and which, moreover, has the advantage of forcing us to investigate into its intimacy with the mental dispositions of hysterical patients.

The digestive disturbances coming on during the course of hysteria are numerous. They consist in repeated and, at times, almost uncontrollable attacks of vomiting, in gastric pains, hematemesis, attacks of constipation or diarrhea,—peculiar either in their evolution or in some of their characteristics. Among the serious symptoms, the vomiting of blood has especially attracted the attention of physicians; gastralgias—phenomena purely subjective—are little understood; and intestinal disturbances are still left a matter of much uncertainty. I shall study from preference some of the odd perversions of appetite, of which

the superabundant examples and varieties will be almost innumerable. In relating singular facts in cases of strange appetites, we always neglect to study the true condition of the patient, and are reduced to the unproductive idea, that hysterical patients are subject to the most improbable disorders of the digestive functions. It would not, however, be an impossibility to attempt a classification of these sort of anomalies; but although I have noticed a great number of them, I will not speak of them here, even incidentally.

The object of this memoir is to make known one of the forms of hysteria of gastric origin, so frequent that a description may not be, as it comes too easy, the artificial generalization of a particular case sufficiently constant in its symptoms, as physicians who have observed it could affirm, and those who may meet it in the course of their practice would not be taken unawares. The name of anorexia may perhaps be replaced by that of hysterical inanition, which would better represent the most striking part of the symptoms. I have chosen, without otherwise defending it, the first term precisely because it is connected to a phenomenology less superficial, more delicate, and also more medical.

Of the various periods which compose digestion, the best analyzed by the patients and least studied by physicians is certainly that of the appetite, for alimentation or for food. If the term of anorexia is generally adopted in order to represent a pathological condition, it has no physiological correspondent, and the word *orexia* does not belong to our tongue. It happens that we want expressions to designate the degrees or varieties of inappetence: so likewise the poverty of the vocabulary answers to the insufficiency of knowledge. In certain cases the appetite is suppressed without the patient experiencing any other sensation than the regret of being deprived of an excitant which invites him to nourishment. It does not arise from repugnance, and often the proverb, "Who wishes an appetite, it will come by eating," is found to be true. Under other conditions, the patient experiences a more or less acute repulsion for certain foods. Under others, finally, all alimentary substances, whatever they may be, provoke disgust. As general as the inappetence may be, it has always a graduated scale, and foods are not indiscriminately repulsed with a like insistance.

There are, on the contrary, affections, perhaps either of the central nervous system, localized or diathetic, which are accompanied by an illusory appetitive sensation, returning at unequal or quasi regular intervals. Among some hysterical patients, we observe those false, exacting appetites, imperious to the same degree as among certain diabetic patients. Almost always the patients, obeying a theoretical hypothesis, start off with the idea that their indisposition is due to inanition, and that they will succeed in driving it off by means of some nourishment, however small in quantity it may be. Experience shows that two drops of laudanum will serve better to appease imaginary hunger than the ingestion of food. With the exaggerated sensation of appetite is the supposition that nourishment will calm the want, answering in an inverse sense a diminished appetite, and the conviction that alimentation will be injurious. The patient acts from thence, as in the first case, conformably to an instinctive hypothesis. Docile, desirous of being relieved from her troubles, she tries, and she acquires the certainty that her health increases more by continuing alimentation, freed from suffering, that her apprehensions were ill-founded. Indocile, anxious before all of avoiding a hypothetical pain, but alarmed from the start, she maintains her mode of treatment and abstains from eating. Such are the cases of hysteria which I intend to touch on and retrace their history. Observations which, during years, were not related, and I believe that it is worth more, in place of particular cases, to present a picture of the disease.

A young girl, between 15 and 20 years of age, experiences an emotion that she avows or that she pretends. More often it arises from a real or imaginary project for her marriage; from some vexation or some sympathy; and, at times, from some more or less conscientious aspiration. At other times, one is reduced to conjectures as to its occasional cause—perhaps the young girl is interested in concealing some fact by her mutism, a thing of habitual occurrence among hysterical patients; perhaps she forgets the first cause of her sickness, and we shall see that, among these multiple causes, several may pass unperceived.

She experiences from thenceforth, after meals, vague sensations of fullness; anguish; gastralgia; *post prandium*, or rather following from the commencement of the meal. Neither the patient nor her friends attach any importance to it; no lasting

inconvenience results from it. The next day the same sensation is repeated, and it continues still trifling, but lasts for several hours. The patient makes up her mind that the best remedy for this indefinable *malaise*, so particularly painful, consists in taking less food. Up to this point there is nothing extraordinary; it is not the patient suffering from gastralgia who may give way to this temptation, up to the time where she acquires the certainty that her relative inanition is not only without profit, but that it aggravates her sufferings. Among hysterical patients the state of affairs is different. Little by little she reduces her nourishment, feigning sometimes a headache, sometimes a momentary disgust, sometimes for fear that the painful after-meal impressions may be repeated. At the end of some weeks these are no longer supposed transient repugnances; there is a refusal to partake of food, which may be prolonged indefinitely. The disease is declared, and it follows so fatal a march that it becomes easy to prognosticate its future.

Unhappy the physician who, not recognizing the peril, treats the fancies without ability, or treats the obstinacy of the patient, which he rightly hopes to conquer, by medicines and friendly advice, by threats and attempts at intimidation. With the hysterical patient a first medical mistake is never reparable. Ever on the lookout for opinions concerning themselves, of those especially with which their family is associated, they never pardon them, and considering that the physician has commenced the hostilities, the patient gives herself the right to continue them with an implacable tenacity. At this initial period, the only wise conduct is, to observe, to hold one's tongue, and to remember that, when voluntary inanition dates for several weeks back, it has become a pathological condition long dated.

It is important, in order to appreciate the various elements which co-operate at the commencement of the disease, to submit each one of them to a minute analysis. The gastric pain, which is, or which appears to be, the starting point of the symptoms, especially merits attention. It varies in intensity from a confused feeling of pressure up to a sort of stomachal cramp, accompanied by faintness, pallor, sweats, or even chills; no vomiting, no real wish to vomit, even in extreme cases; only the patient pretends that a degree more of it would provoke vomiting. To rely on appearances, the painful cases differ in nothing from

those that we have such frequent occasion to observe in all the affections of the digestive apparatus. It is alimentation which brings them about; they do not take place except from eating. If it is thus, we shall miss distinctive signs, and shall be obliged to add gastralgia to the already too numerous list of localized hysterical neuroses.

The painful sensation exists not only at the time of taking food, but it persists more or less sensibly in the interval between meals; sometimes it is insignificant, sometimes more troublesome; at times so slight that the patient suspects a general *malaise* without being able to assign it a fixed point. Whatever then may be its form, its seat, and its degree, is the painful sensation due to a stomachal lesion, or is it only the reflex expression of a perversion of the central nervous system? I do not believe that its solution remains doubtful from the moment that we pose the question.

We find, at the beginning of a great number of cerebro-spinal diseases, præcordial anguish, feeling of pressure, of epigastric contraction, which likewise follow even transient emotions. There is not one of us who may not have felt this sort of anxiety, and connected it to the definite moral cause which produced it. When we suppose, to the contrary, an individual suddenly attacked by an epigastric constriction coming on without appreciable cause, the uneasiness is such that it awakens inquietude. The patient asks herself from whence springs this strange impression, and it is often from such an investigation that the delirium of the unfortunate commences. Supposing that the encephalic affection should not end in such serious consequences, the first hypothesis of the patient, and the most natural, is that she suffers from a disease of the stomach. All epigastric anxiety with its apprehension, the semi vertigo that it brings about after it is exaggerated by alimentation, is a reason, more than ever, to believe in the existence of a gastric irritation. The characteristics of this gastralgia of a reflex cause are not impossible to discern, the circumstances under which we meet it being nothing less than rare.

It is distinguished from painful irritation of the stomach because it is not exactly localized, and that there is added to it a wholly special uneasiness; because it comes on suddenly, and has not been preceded by gradually increasing disturbances of

digestion; and that it is not, besides, followed by dyspeptic symptoms; because the intestinal functions remain intact, except an habitual constipation, which is easily overcome; because the nature of aliments is without influence regarding the crisis; and, finally, because the manner of the pain, when it exists in reality, is not analogous with the gastric sufferings occasioned by a lesion as superficial as it may be. From the moment when we are certain of the nature of the indisposition, we have made important progress in the establishment of the diagnosis. I can not dwell too much on these neuroses of the splanchnic organs, and upon their connections with certain cerebral conditions.

The hysterical patient, after some waverings of short duration, does not hesitate to affirm that the only chance of relief which can be acquired by her consists in abstaining from food. It is a fact that remedies appropriate in other gastralgias are absolutely inefficient, with whatever zeal the physician and the patient may employ them. A reason of another order from that which always plays a preponderant part in hysteria still interposes. The patient has lost the sensation of appetite, and it will be necessary for her to consent to eat, to overcome her fear of pain, without being solicited or even encouraged by an appetite for nourishment; in abstaining from it, she satisfies to the contrary two inclinations at the same time, all hysterical manifestations, if they exist, are suspended, leaving this first phase. The patient, far from being weakened, of being melancholy, exhibits a sort of alacrity which is not usual to her; we might almost say that she takes her precautions for future periods, and that she prepares arguments which she will not fail to use.

The repugnance to eating follows its slow progressive march. The meals are reduced more and more, in general to only one meal, that may be the breakfast or dinner. Almost always the patient necessarily suppresses one of the species of foods, bread, meat, certain vegetables. Sometimes she consents to replace one food by another, to which she takes with an exclusive predilection for the space of some weeks, bread for example by biscuits or by crackers, after which she leaves the aforesaid article of food off in order to replace it or not by some other article of diet.

This state of affairs is prolonged thus for weeks and months, without the general health appearing to be unfavorably influenced; the tongue is clean and fresh looking; there is no thirst;

the persistent constipation gives way to slight laxatives; the belly is not retracted; sleep is more or less regular. There is no emaciation, although the nourishment represents only the tenth of the patient's accustomed regimen.

We know too well the strength of resistance of the general health among hysterical patients to be astonished to see them support without damage a systematic inanition, to which robust women could not expose themselves with impunity. It is necessary, besides, to consider that the diminution of food is made by degrees and without abruptness. Now, the economy is habituated more easily than it would seem to this decrease of alimentation. We have all had a proof of this during the siege of Paris, and we discovered that the diet to which the poor were restrained did not wholly from thence sensibly alter their health.

Another fact, likewise acquired, is that far from breaking down the muscular forces, the diminution of nourishment tends to increase the aptitude for movement. The patient continues to feel more active, lighter, she rides horse back, undertakes long journeys on foot, she receives and makes visits, and undertakes the cares of a fatiguing worldly minded life, without complaining of the lassitudes of which she might have complained at other times; no visible signs of chlorosis or anæmia exist, at least one would not feel authorized to say that inanition has provoked them, for the majority of these patients are already more or less chloro-anæmic.

If the situation does not vary, regarding the anorexia and refusal to eat, the disposition of the patient is modified to a degree that the disease is prolonged, and to the same degree the mental condition of the hysterical patient is made worse.

The physician, if he has promised a rapid improvement, or if he is suspected of unkindness by the patient, has long before this lost his moral authority; nevertheless the patient rarely ever refuses to take some medicine. As she is opposed to nourishment as much, she shows herself willing to take the least attractive remedies. I have seen those who would even swallow pieces of rhubarb, and who would not have, at any price, decided to taste a veal cutlet. The most active gastric stimulants, mild or drastic purgatives and digestive mineral waters, would be taken without either injurious or useful effects. It was the same case with diffusible stimulants, fragrant gums, valerian, hydrotherapy,

baths of various temperatures, various tonics of iron, cutaneous derivatives, etc. Laxatives alone were useful for preventing constipation, other agents would not even procure the attenuation of the anorexia.

When, after several months, the family physician and friends, seeing the uselessness of persisting after all their efforts, commence to be uneasy, it is at this moment that the mental perversion comes on, which by itself alone is almost characteristic, and which justifies the name, that I have proposed for want of a better one, of *hysterical anorexia*.

The family has at its service only two methods that it can always draw on; to beg or to threaten, and both serve as a touchstone. They multiply the delicacies of the table in the hope of awakening her appetite; the more their solicitude increases, the more her appetite diminishes. The patient disdainfully tastes the new dishes, and having thus shown her goodwill, considers herself under no further obligations. The family supplicate, they ask as a favor, as a sovereign proof of affection, that the patient submit to adding one single extra mouthful to the meal that she declared finished. This excess of insistence calls forth an excess of resistance. It is a well known law, and conforms with the experience of all, that the best means of increasing the stubbornness of hysterical patients is to allow them to hear the supposition implicitly or explicitly expressed that if they wished they could control their sickly impulses, a single concession will make them pass from the condition of patients to that of capricious children, and this concession, half from instinct, half from the part taken, they will never consent to.

The anorexia becomes by degrees the only object of pre-occupation and conversation. It forms thus a kind of atmosphere around the patient which envelops her, and from which she cannot escape at any hour of the day. The friends join the parents, each one contributes to the common work according to the inclination of his or her character or degree of affection. Now, it is another law, not less positive, that the patient submits to the allurements about her, and that the disease is developed or is condensed so much more, that the circle in which the ideas and feelings of the patient are moved is more than ever contracted. The fault is not a pathological vice of character only; constantly, in presence of sensations which recall on more than one

side the impressions of hypochondriacs and the crazy ideas of lunatics, the hysterical patients can extract themselves from this domination by a voluntary effort. They soon become forgetful at intervals, and allow themselves to be amused, and this is the only respite which they do allow themselves. Later, they become more engrossed in their own condition, and their ideas of their disease becomes confirmed; at the end of a variable period of this baleful concentration, the patient enters into a new phase; her theme is made, she systematizes it in the manner of certain crazy people, and no longer has to search for arguments; the answers becoming still more uniform than the questions.

Nevertheless, for all those who have seen such painful spectacles in families, this picture will neither appear too detailed nor too sombre. It only remains for us to endeavor to persuade our patients out of their erroneous views by some course of argument which will be as futile as previous ones. To protest that the patient cannot live on a quantity of food which would not suffice for a small child, she answers that her nourishment is sufficient for her; and besides, she has neither changed nor become thin; no one has ever seen her refuse a task or a fatigue; she knows better than any one what is necessary for her; and besides it would be impossible to tolerate a more abundant diet.

Then the inanition will bring on at length a disease of the stomach. The hysterical patient answers that she has never been better, that she does not suffer, and that similar fears are contradicted by her being well.

At this period the pains of the first stage are palliated or dissipated; if they reappear it is only at long intervals or in proportions easily tolerated—still an argument in favor of diet to which the patient gives credit for her amelioration.

The fast, besides, is not absolute, and has nothing in common with the refusal of foods by melancholy patients. The anorexia is not aggravated, and especially is not changed into a disgust similar to that which some phthisical and also many cancerous patients experience.

The patient assists willingly at meals with the family under the conditions that she is left free to eat as she pleases.

That which dominates in the mental condition of the hysterical patient is, above all, a certain quietness, I may say almost a pathological true contentment. Not only does she not sigh after

her cure, but she delights in her condition, notwithstanding all the vexations it stirs up for her. In comparing this satisfied assurance to the obstinacy of the insane I do not believe it exceeds it in measure. When we view all the other anorexias we shall see how much they differ. Even with a strong repugnance a cancerous patient hopes and solicits a food which awakens the appetite, he is ready for every attempt, though incapable of triumphing over his disgust. The dyspeptic, without organic lesion, puts his wits to work in order to vary his diets, to aid himself by all the means in his power, complaining with habitual bitterness of those who suffer from the stomach. Here nothing of the kind; on the contrary, an impregnable optimism, against which supplications and threats alike are broken. I am not suffering, I am very well, such is the monotonous formula which has replaced the preceding one. I cannot eat because I suffer. This expression I have heard repeated so many times by patients that now they represent to me a symptom, almost a sign.

If I attach to the mental condition an importance which may perhaps appear exaggerated, it is that all the disease is recapitulated in this intellectual perversion; suppress it, you have an injurious affection destined to give way at length to proper methods of treatment; carry it to extremes, and you will never go too far, you have a dyspepsia without parallel with the others, which follows a foreseen course, and which would not be driven away by the usual means.

I do not think, besides, that the gastric hysteria would make in this connection an exception; in the other hysterical localizations we find at least an equal indifference, as unmanagable or as painful as the symptoms may appear. The hysterical patient, with a convulsive cough, does not insist that we shall free her from an irritant and at times ridiculous spasm; she complains in consonance with those who complain, but when we try to actively contend against the disease, she assists our treatment more from recklessness than from zeal.

It is the same with paraplegic patients condemned to absolute rest, and who consent to live in this way without requiring fatigue from the physician by useless attempts that he might resort to as heroic means.

THE MORBID ANATOMICAL CHANGES IN EMPHYSEMA.

By Dr. ISAACSON, of St. Petersburg. Translated from *Virchow's Archive*. vol liii., page 436. By D. VAUGHAN, M. D., of Cincinnati, O.

The literature of the pathological anatomy of the lungs in emphysema is very rich in researches, but the present knowledge on the subject is neither clear nor complete in its details. The changes in the vessels in emphysema are least understood. All inquirers in this field of research have directed their attention to the interstitial structure of the lungs, and, partly, to the epithelium. They have hitherto devoted no special labor to the office which the vessels take in the development of emphysema, and to the changes they undergo. The cause of this chasm in the literature of the pathological anatomy of emphysema of the lungs can probably be ascribed to the circumstance that the normal structure of the capillary vessels was first, at a very late time, made known by the labors of Abi, Eberth and others. The result of their researches in emphysema, during fifteen years, may be comprised in the statement that the vessels of the lungs are sometimes contracted, at other times collapsed, occasionally they are obstructed, and sometimes wholly obliterated. But in regard to the pathological changes, there is no definite information given. The imperfection of instruments, chiefly of the microscope, gives some reason for believing that these savants drew their conclusions more from hypothesis than from facts; but even lately, when instruments and methods have been much improved, the inquiry is nevertheless very little advanced. Thus for example:—Waters said, in the year 1850, that capillary vessels, in the first period of emphysema, are farther removed from one another than they are in the healthy lung, and that, at a more advanced period of the disease, the vessels break and become shriveled, so that finally they become an extensive net of vessels. Later, in the year 1866, Villemin, in his researches, states only what was already known. Oppolzer asserts, in his lectures, on the authority of a private communication from Dr. Klob, that the lung vessels are obliterated in emphysema, while in their place a strong growth of cell is developed. Rindfleisch maintains that the quantity of blood which passes through the vessels in a given time diminishes in emphysema; in consequence of this, the caliber of the vessels gradually becomes more nar-

row, the current of blood through them ceases from time to time, and when it ceases entirely the walls of the structures become collapsed.

This is about all that is to be found about emphysema in the literature of the changes of the vessels of the lungs. To fill up the chasm of knowledge I undertook my researches on the subject at the instigation of Prof. Rudnow. In this course I made injections of the lung vessels, sometimes with cold and sometimes with warm, colored materials, according to the methods of Brucke; and I also injected with a solution of nitrate of silver. The specimen I placed, after injection, in 60 per cent. spirit of wine. The incisions were performed by means of the double-knife, an instrument which is specially adapted to researches of this peculiar nature. On examining the sections of the injected vessels, I was convinced that the alveolar tubes of the lungs were much wider in emphysema than in a normal condition. The number of vessels which are distributed to the walls of the alveoli appears also greater. The vessels, which usually become prominent on injection, remain, notwithstanding this, entirely below the range of the surface of the alveoli in the state of emphysema. While in a normal condition they appear widely meandering, they show in emphysema broken lines, their continuity being interrupted, as if they were permeated by the injection only at certain localities. It may be also observed that the diameter of the part fully expanded is smaller than normally, and that accordingly the vessels are more narrow.

To study the beginning of the pathological changes of the vessels, I examined a lung in which emphysema underwent its first stage. The silver solution which I applied showed that the pathological changes began at the endothelium of the capillary vessels. While on injection in the normal state, very distinct black lines were to be seen between the single epithelial cells. These phenomena were not visible after the attack of emphysema. The treatment with the silver salt calls forth no very material changes. The walls of the vessels are darkened, but there proceeds not the characteristic dark lines to the points alluded to. The pathological changes in lung vessels occur first at distinct points, but they soon extend over the walls of the vessels. The changes consist in this, that the affected parts become fine grained, and in these finely granulated parts it would

appear that the white corpuscles of the blood were precipitated.

When the disease has attained a more advanced stage, there is to be seen obstructions in the sections of the vessels, and the obstructing material undergoes a fatty metamorphosis. The obstructed parts preserve their outline for some time, but by degrees they become obliterated, so that at last the vessels become broken or divided, and at the points of separation present the appearance of a *cul de sac* as they are filled by the injection. In this manner, as many observations show, the numerous vessels of the lungs disappear in emphysema, and their obliteration is to be considered as the primary evil; while the other changes, such as the perforation of the alveolar walls, the accumulation of lung-blisters, and the formation of greater emphysemic protuberances, must be regarded as a secondary result. That the obliteration of the vessels themselves is of the character described, is shown by microscopic observations of the thrombi of the capillary vessels.

I have only observed the metamorphosis and the fatty degeneracy connected with emphysema; but what is the more advanced stage of the thrombi, in what precise way they form, of what their structure consists, and what peculiar matter they enclose, I cannot, unfortunately, answer at the present time.

POSITION IN LABOR.

Read before the Iowa State Medical Society, May 28, 1873, by J. W. SMITH, M. D., Charles City, Iowa.

More than thirteen years ago an accidental circumstance directed my attention to the investigation of position in labor; and profoundly impressed with the necessity of more definite views among accoucheurs as to the best position, and the ease and certainty with which it can usually be ascertained, I feel it a duty to make known the result of my investigations.

Opportunities for observation in private practice are not equal to a large lying-in-hospital, but they have been sufficient to convince me that there is a more excellent way than that of guess-work, or convenience, as to the position of a parturient woman. Such experience has also taught me that, in the majority of cases, the proper position can be determined with almost mathematical accuracy, and as one result, the duration of the labor, will often be materially shortened.

Text-books and obstetric teachings—at least all within my

acquaintance—have little that is satisfactory and definite upon the subject. Such fact proves (1) that position is considered of minor importance, or else (2) it is not well understood. This state of things is unfavorable to obstetric science, unsatisfactory to the young practitioner, and most unfortunate to suffering woman.

Cannot the accoucheur be furnished with unfailing directions, in each particular case, as to the position that will cause the labor to be the safest, easiest and quickest possible? I believe that not only possible, but within the easy comprehension of every physician of ordinary capacity, and who carefully studies the subject.

Doubtless many cases do equally well when the position is decided wholly by accidental circumstances. Among the things that are important at the beginning of every labor may be mentioned the proper evacuation of the bowels—a free enema of tepid water, or of salt or soap in water, being advantageous in the majority of cases. The bladder should be frequently evacuated, the clothing loose, and the under-garments so arranged as not to require changing after delivery; the feet kept warm, the head cool, the room quiet and well ventilated. A bed—not of feathers— or a broad lounge should be in readiness.

During the early stage of labor no restriction of movement should be attempted; but moderate exercise, especially walking, should be encouraged, and insisted upon in some cases, until it becomes painful or uncomfortable.

An early examination is to be recommended. When the os is so high as to be reached with difficulty, it is not possible, in all cases, to decide as to the precise presentation, and of course not as to the best future position; but as the case progresses, and usually long before the rupture of the membrane, it is easy to decide as to the proper position. A patient's choice is often wrong, hence the need of deciding for her.

The philosophy of position is based upon gravity and muscular action, including contraction and relaxation. The key-note, or axiom, so to speak, of correct position, is the fact that the fundus of the gravid uterus, in its normal state, is *movable* to a certain extent in nearly all cases, when not obstructed. The field for the application of this principle is almost unlimited, and will vary to some extent in every individual case.

HOW TO DETERMINE THE PROPER POSITION.

The directions how to decide as to the proper position had better be explicit; and to save time and space we will avoid all technicalities and proceed at once to explain how it is possible to decide upon the position in which the parturient powers will most quickly, easily and safely overcome the natural resistance. External abdominal examination often aids in diagnosis, and should not be omitted in doubtful cases, but is not usually as reliable as that per vaginum.

Suppose that we cannot tell the exact presentation, or that we can, and in either case that the presenting part is found to impinge or press most strongly upon or towards the *left* side of the pelvis, and even while the os does sometimes point, so to speak, to the *right* side of the median line of the pelvis. These two things occurring together may be said to be contradictory, and they do appear so at first observation—that is, the os inclining to the right, and the bulk of the fœtus to the left side of the pelvis. To decide accurately, before or after the full dilatation of the uterus, a gentle upward pressure of the fœtus by the finger, between pains, will often be necessary. The finger can then be passed from side to side, and thus determine *which side of the pelvis is most filled or pressed upon by the presenting part*. If, as supposed, the presenting portion presses most directly upon, or to the left side of the pelvis, and, as stated, independently of the position of the os, that side—upon the left—is the position in which it will uniformly be found in practice best to place the patient; if to the right, the position should be upon that side. This is very easy to remember.

When placed upon the side, as indicated, it will often make all difference *how* the woman is placed—at least during a portion of the time—occasional changes of position being admissible, and sometimes necessary in the earlier stages to prevent too great fatigue or disgust with any one position. The woman's head should be low, the fundus moving more freely by gravity when it is so; the thighs and knees flexed; the feet supported, if preferred; and the arm that is underside placed either wholly back of the body, or, which is often easier, the elbow sharply flexed, and only the hand allowed to rest in front of the chest. She will then be partly upon her face, as the position for using Sim's speculum, and cannot easily turn upon her back, as otherwise she would be likely to do, and thus defeat the full advantage of position. The knees, in the latter stages of labor, had better be supported by an assistant, or by a pillow or quilt firmly rolled together and placed between them.

In many cases of tedious labor, after the *proper* position is assumed, such position, and a single pain or two, if strong, will often bring the fœtus into the proper axis of the pelvis, and thus rapidly complete the labor. When the effect is not so rapid, and some other position is preferred, it can be assumed without detriment, after the cause of delay has been overcome.

ABDOMINAL SUPPORT.

In case of obliquity, pendulous abdomen, uterine inertia, etc., a wide bandage or support is often a great help, and sometimes necessary, in addition to the best position. It can be readily extemporized, and while it may not be as convenient as some specially designed, with me it has answered admirably. It should be about two yards in length, from twelve to eighteen

inches wide, and made of strong material. Two towels can be sewed together, or a sheet torn lengthwise and doubled once in the same direction.

HOW TO USE IT.

In lateral obliquity it is always best, and sometimes in other cases, to place the woman upon her side, as already described, with the center of the bandage passed evenly across the abdominal prominence, with one end carried under and the other over, and both behind the patient, so that the two ends can be firmly grasped together by one or both hands, usually best by the physician, and steady pressure can then be made across and around the abdomen during each pain. To make such pressure reliable, will require the counter support of the back at the same time, and this can often be made the most certainly and easily by the foot or knee of the person holding the bandage, a pillow or other soft support being first placed against the back, and, if room, the person sitting upon or standing at the side of the bed, while the abdominal pressure is applied by the bandage. The two forces can thus be made to act together and keep the woman in the desired position, while varying the amount and direction of the support, as is indicated. The bandage should be seized near the ends, to prevent too great compression of the sides of the woman. To aid sufficiently in some cases, may require the application of the bandage continuously for a length of time, or only occasionally and during a few pains. Posterior obliquity, as in pendulous abdomen, can sometimes be corrected by dorsal position, elevation of the hips, and external pressure by the hands; but experience teaches that the side position and bandage is often most effectual in those cases. Uterine inertia can sometimes be overcome by elevating the shoulders and pressure with the hands, but the kneeling or standing posture alone is sometimes sufficient and even preferable, the patient to be supported under the arms by two assistants during each pain.

SUMMARY OF DIRECTIONS.

To epitomize or briefly recapitulate the foregoing directions: Most cases have a lateral obliquity or pressure, so to speak, and if the presenting part crowds upon, or most nearly fills one side of the pelvis, then upon that side is the proper position. If towards the hollow of the sacrum, place the woman upon her back, elevate the hips, and, if necessary, use external pressure. If towards the sacrum, and one side, better place her upon that side, observing the arm is in position; and, if necessary, apply the bandage and support the back. If upon or towards the symphysis pubis, place her in a kneeling and almost horizontal posture, and, if necessary, upon the knees and face for a short time.

Formerly I was partial to the position upon the back, as I

thought it easy and convenient, but observation convinced me that the large majority of cases do the best upon one side or the other. It seems to most readily correct and overcome the slight obliquity which often prevents or delays the fœtus from freely entering the pelvis, and sometimes retards or "locks" it in its passage through it. I think the perineum is safer when upon the side, even if the labor is quicker, as the strong, voluntary pains, when upon the back, are most likely to cause rupture.

While the subject of position is important in nearly every case, its most evident triumphs are witnessed in some protracted and tedious cases. Did time and space permit, I could give a large number of cases in proof of what has been and can be done by position. A few illustrative ones are given, but as before observed, the application of the principle is very extensive, and must vary with every case:

CASE I.—Mrs. P——. Was called in consultation, and this was one of the earlier cases to open my eyes in regard to position. Age 29; primipara in good health; been in labor three days; uterus dilated; vertex presentation; and pains strong. The cause of delay was not evident, but external examination showing some lateral obliquity, and viewing that as a possible cause, she was urged to lie upon the side to correct it. She said she could not upon the side desired, and would turn upon the back as soon as a pain commenced. Seeing this, we finally placed her upon the side desired, and kept her there during several pains, by one assistant at the shoulders and another at the hips. After about the second pain, the position was easy, and the case completed in a few hours, safely to mother and child. The proper position of the arm and the use of the abdominal bandage would have materially aided, if understood.

CASE II.—Mrs. M——, age 30. Multipara large and healthy; been in labor two days. Was sent for with view of instrumental delivery. Head presentation; uterus dilated; pains strong. Diagnosis, as cause of delay, lateral and posterior obliquity. Position on side, under arm flexed, and the use of bandage and support to back. Completed the labor successfully to mother and child within one hour.

CASE III.—Mrs. S——, age 31. Multipara healthy; been in labor two days. Lateral obliquity, and been kept in wrong position; strength greatly exhausted; head presentation; uterus dilated. Corrected position, after which labor advanced slowly, owing to the strength, until the head distended the external parts, when it was completed by forceps, safely to mother and child.

CASE IV.—Mrs. H——, age 34. Multipara health imperfect; in labor six hours; uterus dilatable; head presenting; pains weak. Diagnosis, inertia. Nothing seemed to do any good until, with great difficulty, she was made to stand upon her feet,

supported at the shoulders. Immediately the pains were strong, and, from choice or obstinacy, she would not lie down again; the second pain, within ten minutes, completing the labor.

CASE V.—Mrs. K——, age 40. Multipara health good. In labor six hours; pains fair; uterus dilatable; head presentation. A bad case of placenta previa. Diagnosis, lateral obliquity. Placed on side, with arm back; the second pain; within five minutes, completing labor safely to mother and child.

CASE VI.—Mrs. N——, age 17. Multipara healthy; in labor seven hours; pains good; uterus so high could not diagnose. After eight hours, found the head was resting upon the symphysis pubis. Placed upon the knees, on the floor and leaning far forward, the head just resting upon the side of the bed, and result was the successful completion of the case within a few minutes.

CASE VII.—Mrs. McG——, age 35. Multipara health fair; in labor ten hours; pains irregular, uterus dilated; funis prolapsed, the left foot and breech presenting. Replaced the cord and held it a time with the hand. Delay partly owing to lateral obliquity and pendulous abdomen. Tried the side position with bandage, but complained of position, and was no advancement, except to correct the lateral obliquity. Then placed on back, folded a thick quilt, until some ten inches thick, and placed under the hips, the breech and position preventing the return of the cord. The whole head was kept wet with tepid water. After ten minutes, the quilt was removed, and immediately a strong continuous pain came on, which brought the foot and breech externally, while a few more shorter pains completed the labor, saving the child. The pulsation of the cord was carefully watched, and care taken that the face was toward the sacrum.

After ten years of obstetric experience, I confess that I knew very little—next to nothing would be nearest the truth—of the true principles which should decide the particular position best for each case.

Neither do I think that my case was exceptional, for I have never met or known of a practitioner who had investigated the subject in that direction. It is even to be feared that the convenience of the accoucheur, and not the woman's condition, has oftenest decided the position. While thus groping in the dark, how trying some cases were, and how the poor women continued to suffer, and we could not tell why, or even help her! How we tried, perhaps vainly, to induce her to "change her position," and very properly too, as almost any change might prove a relief. What accoucheur has not experienced more or less of such cases, yet why they were so he could not discover; neither can any one tell in all cases.

Perhaps a physician's wife ought not to be a witness in her husband's case; but it is the opinion of my wife that my obstetric cases now average only about half the length of time that they formerly did.

I should feel to reproach myself for waiting so long since my attention was directed to the subject, before making it public, were not considerable time necessary for its satisfactory investigation.

Among the advantages sure to result from the future study of this subject, may be enumerated the following, viz:

1. Lessening the suffering of the mother, and the risk to mother and child.
2. Shortening the duration of ordinary labor.
3. The necessity of instrumental delivery will often be avoided.
4. There will be a less number of "tedious," "powerless" and "obstructed" cases.
5. The community will be better able to discriminate between true science and pretension, in obstetric practice.
6. The "curse" upon woman will be partially removed.
7. Obstetric practice will lose much of the dread which now usually attends it.

If I am too sanguine in my views and conclusions, the same are honestly expressed; and should they not all prove to be correct, I believe that they are in the direction of progress, and that what is now begun will be sure to be carried to greater completeness by future investigators.

The importance of the subject is my apology for the length of this communication.—*Medical Examiner*.

THE USE OF PEPSINE IN THE DIARRHEA OF INFANTS.

By JAMES S. HAWLEY, M. D., Brooklyn, N. Y.

In speaking of the causes of infantile diarrhea, Dr. West, in his treatise on the diseases of infants, makes the following remarks: "You will observe that the period of the greatest prevalence of diarrhea coincides exactly with the time during which the *process of dentition* is going on most actively, and that more than half of all the cases of diarrhea occur in children between the ages of six months and two years.

"The older writers on medicine, whose notice this fact did not escape, attributed the disturbance of the bowels to a sort of sympathy between the intestinal canal and the gums, swollen and irritated by the approach of the teeth to their surface. It must be borne in mind that there exists, during the period of teething, a *more abiding cause*, which strongly predisposes to its occurrence. All parts of the digestive canal, and of its dependencies, are undergoing an active evolution to fit them for the proper assimilation of the varied food on which the young being will soon have to subsist. Just as the salivary glands are now being developed, and pour out saliva in abundance, so the whole glandular system of the intestines assumes a rapidity of growth

and an activity of function, which, under the influence of comparatively slight exciting causes, may pass the just limits of health. In too many instances, causes fully adequate to excite diarrhea are abundantly supplied in the excessive quantity or unsuitable quality of the food with which the infant is furnished; for it is forgotten that its condition is one of transition, in which something more than ordinary care is needed, while in accordance with that humoral pathology so popular among the vulgar, the profuse secretion from the irritated glands is regarded as the result of a kind of safety-valve arrangement whereby nature seeks to moderate the constitutional excitement attendant upon teething."

Here we have the *fons et origo* of infantile diarrhea, an abiding, ever present, predisposing cause, always ready to be quickened into activity by innumerable excitants. Errors of diet, or depressing and painful emotions, as anger, fear, grief, or anxiety; food, improper in quantity or quality; perturbing medicines, and over-heating occupations on the part of the mother, and similar errors of diet, changes of temperature, and constitutional vices on the part of the infant, are ever ready and frequently occurring, exciting causes. * * * *

Premising, then, that the great predisposing cause of infantile diarrhea is the state of evolution which the digestive system and its dependencies are undergoing during the period of dentition, the question of therapeutics becomes one of comparative simplicity, and the evident duty of the physician is to allay that irritation of the organs which is exhibited in vomiting and purging, first by the removal of all extraneous sources of disturbance, such as food, improper in quantity and quality, by protecting the skin from too sudden and frequent changes of temperature; secondly, by sedatives, to subdue the excitement which the foregoing causes may have induced, and which, in the enfeebled condition produced by the transition state, are self-propagating; and, lastly, to impart to the struggling and overwhelmed digestive apparatus, that assistance which will enable it to convert food from the character of a foreign, and therefore irritant, material into nutriment which will re-invigorate the natural forces, and enable them to accomplish successfully the great and necessary evolution through which they are passing. Happily the practice of administering excitants to the already over-stimulated glandular system, has nearly passed away. *Hydr. cretæ.* and *Hydr. chlor.* are therapeutical formulæ seldom penned by one who opens his eyes to the light of physiological or rational therapeutics in infantile diarrhea. As sedatives to the over-excited mucous membrane and glandular system of the stomach and bowels, the preparations of opium and the salts of bismuth stand pre-eminent. When irritation, without pain, exists, bismuth most promptly and satisfactorily allays it; but when accompa-

nied with pain, the addition of a minute portion of opium becomes a necessary complement to its effectiveness.

We have now briefly noticed, in outline, the first two conditions of treatment, viz.: the removal of external causes of irritation, and the allaying of the morbid excitement which has sprung from their agency; and it may be asked if the natural functions will not now resume their offices, and the health of the patient be restored? Doubtless such would be the case did not the system labor under the combined effects of the transition state of dentition, and the impairment of strength due to the morbid causes above enumerated, and for which the correctives have been proposed. But the circle of remedies is not yet complete. The key stone of the arch is wanting, and, if left thus incomplete, will tumble back into the disorder and confusion from which it has been raised. The *ingesta* themselves become, for want of digestive and assimilative power, irritants to the sensitive and debilitated organs. Instead of affording nutriment to fortify the system against the dangers of the crisis through which it is passing, the food going through the intestinal canal in an undigested form, becomes itself an irritant, and adds another morbid cause to those already existing. This is not all: The food does not always remain a simple, foreign substance, inducing irritation, but undergoes putrefactive decomposition, adding new and more active sources of disease.

Here, then, is the gap in which we are to stand. And what are the weapons we are to use? Tonics and stimulants, as indispensable as they often are, here become awkward and doubtful. They are indirect and secondary—whips to stimulate lagging energies, and not power to perform the labor and lift the burden. Here the happy thought of Corvisart comes to our relief. The very function which is crippled, we can replace; the very strength which is exhausted, we can supply. By the administration of pepsine, we at once convert *ingesta* into nutriment.

They not only cease to be irritants to the digestive organs, but are absorbed into the circulation, and become sources of power instead of weakness.

Now we have fulfilled all the indications. First, to remove all sources of irritation from the quantity or quality of the *ingesta*, or change of temperature. Secondly, allaying irritation by sedatives. Thirdly, artificial digestion by the administration of pepsine. This simple but effective treatment is not new, but has more than once been presented to the profession for its approval.

In support of its efficacy, especially that portion which relates to artificial digestion, and which this paper is particularly intended to illustrate, a few cases will be brought forward. The first case is one reported in the *Revue Medico Chir. de Paris*, Dec., 1856:—

M. X—, aged 4 years, was admitted into the Hospital of

St. Eugenie, on the 23rd of November, 1854, under the care of M. Barthez. For many months this child had suffered from frequent diarrhea, until it was emaciated and debilitated to the last degree. The appetite was voracious, and the stools contained much undigested food. In the first instance, M. Barthez tried the effect of properly adjusted diet, with small doses of trisnitrate of bismuth, but without avail. He then tried the pepsine, giving a dose (grs. 5) at the commencement of a meal composed of the ordinary food of the hospital. On the following day (the 1st of December) the stools were of a better color, and in other respects more natural than they had been before. Encouraged with this result, the same quantity of pepsine was ordered to be given before each meal.

Dec. 3rd. No stool. This was the first day without a motion for many months.

Dec. 4th. Still no stool. The pepsine discontinued.

Dec. 5th. Two somewhat fluid motions, although there was no change in the diet. There was, however, no undigested matter in the motions. The child was much better in every respect.

Three weeks afterwards the child was discharged cured. M. Barthez, however, did not return to the pepsine, but contented himself with small doses of the trisnitrate of bismuth.

This case led M. Corvisart to try the effects of that remedy in the diarrhea of very young infants.

2nd Case.—Alexander Lang, born on the 2nd of August, 1855, was seized, on the 25th of October, with diarrhea, after a very obstinate attack of erythema and eczema. This diarrhea was accompanied with frequent hiccough and vomiting. On the 3rd of November eight grains of pepsine were given night and morning. On the 4th, the same treatment was continued, and now the vomiting and purging have disappeared, the stools have become natural, the child takes the breast with avidity. The pepsine discontinued.

Nov. 22nd. The vomiting and purging have returned. M. Corvisart has again had recourse to the pepsine.

Nov. 23rd. The vomiting and purging have ceased, and the stools are natural. From this time the little patient went on well.

M. Corvisart adds, that many cases of the kind have failed under his notice, and that the acidified form of the pepsine, which he himself tried, was quite as efficacious in these cases as the neutral form proved to be in the hands of M. Barthez.

The writer has been in the habit of administering pepsine in the diarrhea of hand-fed and teething infants for several years, with marked success.

Notes of former cases not having been preserved, a few which have occurred in the last few days must suffice. * *

8th Case.—July 28th, D. N——, an infant, two weeks old, said to have been born in a plump and healthy condition. Its pres-

ent state is one diametrically opposite. Its face is thin and skinny, exhibiting painfully the bony outline. It has thin, muddy, but not frequent, alvine discharges, and vomits whatever it swallows, even to half a teaspoonful of its mother's milk. It lies stupid, with its eyes closed, and refuses the breast. It also has an intense muguet. In this extremity I ordered three grains of pepsine to be given every three hours, and half a teaspoonful of the mother's milk to be administered with great frequency. The following morning I found the mother, through utter hopelessness, had neglected my directions. It was only through much persuasion, and the co-operation of a friendly neighbor, that she was induced to pursue the treatment. During that day the vomiting ceased, and on the following day the child took the breast, and retained and digested its nourishment. From this day it steadily improved in condition, and its diarrhea and muguet disappeared.

On the 8th inst., one week after my last visit, I was called to see its mother, and could hardly have recognized the infant which so lately had seemed in the last stage of inanition. Its face had acquired a comparative fullness, its color was restored, it nursed well and freely, and seemed as likely to live and thrive as any infant. This child was simply starving to death. What led to its condition of inanition I could not satisfactorily learn, but its state seemed most hopeless. The case illustrates, in a remarkable manner how little assistance will restore the digestive faculty to its normal activity, and enable it to perform its functions unassisted.

9th Case.—Christian Schwindt, aged $2\frac{1}{2}$ years. This child has been suffering about six months from diarrhea, and has become extremely emaciated and pallid. His food is passed undigested soon after ingestion. He has been under treatment during the greater part of his illness, without success, and one of his medical attendants had pronounced the case incurable.

I ordered 15 grs. of the Am. Pepsine every time food was taken. The stools immediately began to show less undigested food, and the diarrhea to abate. In four or five days the diarrhea ceased, and flesh began to return to the emaciated frame.

At the time of making this note, one month after the administration of the pepsine, he is in perfect health.

Without adding cases of a similar kind from our own experience, which would, perhaps, extend the list to a tedious length, we take pleasure in submitting the testimony of Dr. R. E. Van Gieson, in favor of the efficacy of the preparation of pepsine in the diseases under consideration. The Doctor, in furnishing us with his notes, remarks: "I have found pepsine fitted for the treatment of that fearful scourge of children, cholera infantum, *after* the more profound and violent initial symptoms have been subdued by direct sedatives, such as hydrocyanic acid, ice, creos-

sote, and the like. It has seemed to me that when the vomiting and purging have by such measures been arrested, that the whole gastro-intestinal tract is utterly incapable of assimilating even the blandest articles of aliment. We stand, as it were, between the danger of starvation on the one hand, and the peril of again irritating the intestines to the evacuation of exhausting discharges by the administration of food. Just here pepsine is *the* remedy. By its aid we can secure the digestion of food which would otherwise irritate. So long as the stomach is disposed to remain quiet, we need not feel alarmed if for a day or two the discharges are somewhat frequent. An astringent and opiate suppository will control this, and, in the meanwhile, we are gradually bringing the intestinal tract to its normal condition, *i. e.*, digestion."

Another great advantage arising from the use of pepsine in this disease, has been rendered apparent by a careful comparison of cases treated by the most approved methods in vogue some eight years ago. The medical gamut was then sedatives, opiates, astringents, tonics. It yielded good results, but the cases were a long time in getting well. There came a period when the per-nitrate of iron and the salts of quinia seemed almost powerless. This might be the third week or the third month in the disease. There was no particular irritation of the stomach, but unless the astringent was given with great regularity and in augmented doses, the discharges still continued. In these protracted cases the gastro-intestinal system seems but a passive tube, through which the food passes pretty much as it entered the mouth, giving but little nourishment to the patient and much annoyance to the atonized viscera. In these cases pepsine is very clearly indicated, and will slowly but quite certainly, aid in the digestion of judiciously selected nutriment, until the system can recuperate sufficiently to manufacture its own pepsine, when the artificial substitute can be withdrawn. The annexed case illustrates the foregoing remark in a very clear manner.

C. H.—, aged 18 months, hand fed, chiefly on condensed milk for last ten months; central and lateral incisors through; first came under my care July 29th. Past history: Has been under treatment by another physician for a week. Was taken in the beginning with vomiting and purging, which were in a measure subdued by the treatment. The child was then pronounced better, and the visits discontinued.

Present condition: The child is much emaciated, face shrunken, and of that senile appearance so indicative of the ravages of cholera infantum. The stomach is still irritable, and the bowels operate from five to eight times in twenty-four hours. Discharges similar to chopped spinach. The child craves drink constantly.

R. Pepsine, 3 i; make twelve powders and give as before, with plenty of open air.

Under this treatment the child has steadily improved. The discharges are growing firmer in consistency each day, and vary in frequency from one to three in twenty-four hours. The appetite being now fair, and the discharges nearly normal, the pepsine will be withdrawn, and port wine and tincture cinchona substituted.

THE CLARKE COUNTY MEDICAL SOCIETY—JULY MEETING.

J. H. RODGERS, M. D., *President*. ISAAC KAY, M. D., *Secretary*.

This Society held its regular meeting for July on Thursday the 10th, commencing at half-past one, P. M. Dr. J. H. Rodgers, President, in the chair. Members present, Drs. Banwell, Bryant, D'Richey, Hazzard, Kay, McLaughlin, Owen, Pollock, Reeves, J. H. Rodgers, Senseman, Stonebarger, Whitehead and Reddish.

Dr. Kay reported a recent case of fracture of the leg in a boy 14 years old. Both bones (the tibia and fibula) were broken about the middle, and the fractures ran in an oblique direction. There was considerable distortion of the limb and likewise a severe sprain of the ankle joint, which, however, had not shown itself much at first. After bringing the fractured ends of the bones into exact coaptation, he applied Day's double inclined splint, and held the parts *in situ* by the clove hitch adjustment. This old surgical device was very carefully applied so as to cause the least possible amount of pain compatible with the necessary restraint of the leg. Soft but strong material was used, and firmly attached to the sliding foot board of the splint. After the lapse of seven or eight hours the usual amount of pain and uneasiness occurred, and the bindings were re-adjusted. It was exceedingly difficult to keep up the necessary amount of extension without causing such a degree of distress as to require frequent slackings and change of the clove hitch. On the fourth day after the accident the sprain in the ankle began more clearly to manifest itself as the cause of the extraordinary intolerance of the clove hitch, and as the frequent loosening of the extension were beginning to endanger the future well-being of the fracture, an entire change of base became necessary. The old modes of fastening were entirely abandoned, and the more recent appliances of adhesive strips used by some surgeons were resorted to. He had used this mode before, but never with such highly satisfactory results as in the present case. The strips were carefully fastened to the side, and the anterior and posterior aspects of the leg, and they were made sufficiently long to tie to the adjustable footboard. By this means the leg was kept straight as a reed for five weeks without pain, and without the

loss of one hour of sleep during all the nights of this time. Of course frequent visits had to be made at first, in order to pad and repad the parts, so as to prevent galling and displacement of the fracture; such accidents as will take place, even with the best of fastenings, where this careful and constant supervision is neglected. He had omitted to state, that before resorting to the strips, he had also used a laced cloth gaiter, but the shoe impinged so much upon the sprained ankle as to make the expedient quite painful and almost impracticable. The chief point of excellence in the adhesive strip application consisted in the uniformity of its pressure upon a large surface of the leg. Having this equable bearing upon the flesh, there was no danger from excoriation of the skin or interruption of the circulation. Hence the complete ease and comfort enjoyed by the patient under this treatment. He thought it might be laid down as a rule that so long as the patient suffered much pain under any adjustment whatever of a fracture, there was extreme danger that the restlessness and tossings which ensued would cause displacements, especially in the night. Thus the importance of seeing the patient often, especially for the first week or two after the accident. In this way everything pertaining to the splints and bandages can be so fitted and arranged as to enable the patient to remain quiet, and in this way give a favorable opportunity for the fracture to heal satisfactorily. If this principle of practice be neglected, and the dressing examined only at long intervals, even from the first, the practitioner will have the mortification finally of finding a crooked and unsightly limb as a result.

Dr. Pollock reported a case of fracture of the radius and ulna.

Dr. Bryant remarked that the subject of fractures was one of great interest to every practitioner. Fracture, in order to be treated successfully, requires the exercise of a sound judgment. Ingenuity on the part of the surgeon is also called into requisition. He had some experience with the adhesive strip adjustment of fractures. But there were cases in which this management does not suit the case so well as other fastenings. Dr. B. mentioned several interesting cases of fracture occurring in his practice. He always found it important to make the patient comfortable as possible. Otherwise the treatment gives dissatisfaction to the patient and friends, and the restlessness of the patient will endanger the well being of the limb. He had found Smith's anterior splint to be the best he had ever used for certain fractures of the lower extremities. Especially had this excellent splint worked finely in a broken thigh. There were cases, however, in which Smith's splints might profitably be displaced by other splints. Sometimes it is important to use but little extension and counter-extension. In these cases the junk bag and the pulley extension with light weights attached

had proved highly satisfactory in some of his cases. Dr. B. proceeded to show the class of fractures in which the straight splints were inadmissible. Strips of sheet lead or even of muslin could be used in connection with the adhesive strips to good advantage.

Dr. D'Richey used plaster of Paris splints.

Dr. Owen preferred Physic's modification of Desault's splint.

Dr. Hazzard reported a case of post partem puerperal convulsions. He treated the case with hydrate of chloral, bromide of potash and chloroform, used consecutively. This case was discussed by Drs. Hazzard, McLaughlin and Owen.

Dr. Owen had had an experience of over forty years in the management of puerperal convulsions. He thought some practitioners were so much afraid of being called routinists and old fogies as to be led into errors of practice in medicine. He would feel unwarranted in undertaking to treat a bad case of this disease without venesection, and many of the other old and well established means of cure. He had always had reason to be satisfied with the results of his practice in these cases, *i e.*, he regarded the older modes to be fully as good as some of the more recent plans.

Dr. J. H. Rodgers reported a case of cholera morbus, in order partly to have introduced to the society the subject of cholera and choleraic diseases. The patient had been feeling unwell for several days before he saw him. The patient had been using a large quantity of pills, salts and senna, of his own prescribing, until these medicines began to have an excessively cathartic effect. When Dr. R. first saw him there was a cold clammy state of the skin, cramping and pain in the stomach and bowels, and vomiting. There were light, watery evacuations, with little or no bilious matter. The man seemed to be an almost hopeless case. Dr. Rodgers found it necessary to use the hypodermic mode of administering an anodyne. He used morphia with a hypodermic syringe. The patient, unexpectedly to himself, recovered. He believed the use of opium hypodermically would finally be adopted by the profession. There was little good in attempts to give medicine by the mouth after obstinate vomiting had set in. It was in his opinion time lost, and, were genuine Asiatic cholera to appear, he should not depend much upon administration of medicine per mouth, after vomiting had fully commenced.

Dr. Senseman agreed with Dr. Rodgers in his views of the efficiency of the hypo.

Dr. Kay expressed the opinion that there had not been a single case of genuine cholera in Springfield during the summer. He had made special inquiries relative to a case of reported cholera which had died within the last few days. He had pushed his inquiries in regard to this case from the simple fact that it

was more generally believed to be cholera than any other case occurring in this city. In fact, it was the only case in which the attending physician *even claimed* that it had been cholera. This case was entirely wanting in the pathognomonic symptoms of Asiatic cholera. The patient had previously been enfeebled by chronic disease—just such a person as would have yielded readily to a severe attack of cholera morbus.

Dr. D'Richey had not much confidence in the use of the hypodermic syringe in the treatment of cholera.

Dr. Bryant proceeded to point out the nature, cause and treatment of cholera morbus and cholera. He didn't believe that there was any Asiatic cholera now in this city. The causes of genuine cholera are somewhat occult, and many of the theories of transportation of cholera from one place to another are mere speculations and it might be whims. Dr. B. discussed the animalcular theory, to the great amusement of the Society. The most important branch of the subject under consideration pertained to the prevention and cure of the disease. He had great confidence in the submuriate of mercury. This medicine would remain on the stomach and rouse the liver when no other will. Combined with opium we have in this remedy certainly one of the most reliable remedies within our reach. This community should relieve itself of every predisposing cause of cholera. There are several cess-pools within the limits of Springfield which should be removed. Frequent personal ablutions should be faithfully practiced, and good ventilation secured in the houses. Green and hot house vegetables, such as are imported in an overheated and wilted condition, should be avoided.

Dr. Owen had seen some remarkably severe cases of cholera morbus lately, but he did not believe that there had been a single case of genuine Asiatic cholera in this vicinity during the present summer thus far. There was, however, a strong tendency to crampings in the cases of cholera morbus and cholera infantum occurring this season, such as generally complicated these cases during cholera times. One of the most prolific inducing causes of cholera was the effects of fear. There is an *essential* difference between cholera and cholera morbus. In the former there is a completely locked-up condition of the liver. He believed in the use of submuriate of mercury combined with astringents enough to allow the mercury to produce its specific effects. So soon as these effects are produced upon the constitution the patient was safe. He would not recommend too radical a change in the patient's diet unless his previous diet had been manifestly improper. And yet great care should be observed upon this point.

Dr. Hazzard had met with no Asiatic cholera about Harmony, but an extraordinary amount of choleraic disease. He believed

in the hypodermic mode of administering medicines in bad cases of vomiting in this disease. He would not be willing, however, to dispense with mercurials. Persons should change their clothing according to the conditions of the atmosphere.

Dr. Reeves held that cholera was essentially a contagious disease. It was well oftentimes for the inhabitants of a city sadly scourged with cholera to leave for the pure atmosphere of the country. He did not believe that there was a case of cholera in Springfield. But just as soon as a genuine case of cholera came here from abroad it would constitute a centre from which the disease would spread. He believed that we would have it eventually, and it would come from contagion. People whose nervous systems are liable to prostration from fear had then better leave the city. We have now, however, a choleraic constitution of the air in the whole country. Dr. R. then proceeded to speak fully upon the treatment of cholera. Opiates should be used to stimulation, but not sedation. Anodynes do produce a delightfully calmative effect, and, when combined with astringents and alteratives, constitute a reliable mode of treatment. Ward off the collapse by all means if possible. The mode of doing this was, in part, by using camphor or chloroform, or some of the warm aromatic teas, with Hoffman's anodyne.

Dr. J. H. Rodgers entered an earnest protest against Dr. Reeves's theory of the contagiousness of cholera. The vast preponderance of the medical authority of the world was against such a notion. It led to much unnecessary alarm and to the practical neglect of the sick at a time when careful nursing and other assistance were highly necessary. Dr. Reeves's views upon this point, not being well established in fact, should not be promulgated as the opinion of this society, inasmuch as they lead to rather disastrous results.

A communication was read from Dr. E. T. Collins, of South Charleston.

The Society then, after a session of nearly four hours, adjourned to meet again on the second Thursday in August. Subject of cholera and choleraic diseases to be continued.

ALCOHOLIC PARAPLEGIA.

By SAMUEL WILKS, M. D., Physician to Guy's Hospital.

The above name is one I have long used in reference to a class of cases which are not at all uncommon, but have been hitherto left undescribed, in a manner worthy of their importance, in systematic works on medicine. In my published lectures on disease of the nervous system I briefly referred to the affection as one requiring our earnest recognition, and gave some particulars of

the cases which I had then seen. Since that time several others have come under my notice, and during the last year no less than four more. These facts had led me to commence a paper for the consideration of one of the medical societies, when I met with an essay by Dr. Handfield Jones, contained in the *Practitioner* of last month, on "Epilepsy and other Nervous Affections resulting from the Excessive Use of Alcohol." A perusal of this essay shows me that my object is now unnecessary, and that I need do little more than recommend its attentive perusal to the readers of the *Lancet*, and say for my own part that I can endorse nearly all the statements therein contained. I have seen epilepsy and many other nervous diseases result from alcohol, although my attention has been more especially drawn to the spinal affection.

"*Drunkards' or Alcoholic Paraplegia.*—I do not know that this is deserving of a distinct name from its possessing any pathological peculiarities; but as arising in connection with a very well marked exciting cause, it may deserve your especial attention, and I refer to it the more especially because I believe authors have generally overlooked it. I have already told you how long-continued habits of intemperance in alcoholic drinks tend to the production of a fibrous or fatty degeneration of the various tissues of the body, and that, as a consequence, the membranes of the brain and spinal cord become thickened, and the organs within wasted. This, of course, would give rise to what might be called a general paralysis of body and mind. But besides these general results, we often meet with more direct effects on the spinal cord, and to these I particularly refer. I have now seen so many persons, especially ladies, who have entirely given themselves up to the pleasures of brandy-drinking, and been rendered paraplegic, that I have become pretty familiar with the symptoms. From what we hear of our continental neighbors, it would seem that the diabolical compound styled 'absinthe' is productive of exhaustion of nervous power in even a much more marked degree; it would appear that the volatile oils dissolved in the alcohol give additional force to its poisonous effects. Of course, drunkards of all descriptions suffer from nervous and muscular weakness; but, as I before said, it is more especially in the legs that the effect is most striking. A loss of power is first observed, accompanied by pains in the limbs, which might indicate a chronic meningitis of the spinal cord, and in some cases there is anæsthesia. There is, at the same time, some amount of feebleness of other parts of the body as well as the mind, and thus an approach to general paralysis is produced; but sometimes the symptoms are almost confined to the legs, and resemble in character those of locomotor ataxy."

Since this was written I have seen several cases of a similar

kind; and it is worthy of remark that they occurred mostly in women. I would repeat that something more definite is intended by the term "alcoholic paralysis" than that general muscular and nervous debility which is as well known to the public as the profession; for no character is more easily recognized on the stage of the theatre than the victim of chronic drunkenness. That which I wish more particularly to draw attention to, is the case where alcohol is seen exerting its influence more directly on the spinal cord, making paralysis the leading symptom. Although there is a tendency to a particular form of degeneration in alcoholism, it is not very evident why one person should be affected in one way and another in another; or why any person should have cirrhosis of the liver, another Bright's disease, and a third atrophic meningo-cerebro-myelitis. I use this term since the changes which the brain and spinal marrow undergo are probably identical with those which are found in the two other affections just mentioned. As regards the brain, the tissue degenerates and the membranes become thickened, and thus the mental condition of the "brainless sot" is familiar to all. It very often closely resembles that observed in the general paralysis of the insane; which is not remarkable, seeing that the two affections may have in some cases a similar pathology. Now, in alcoholic paraplegia there is every reason to believe that the spinal cord is affected in the same way as these other organs, and the following is the usual condition of the patient: She lies in bed or on a couch, complaining of severe pains in all the limbs, more especially in the lower ones, which are much wasted, or of a sensation like electric shocks running through them, together with numbness and considerable anesthesia, and at the same time only slight power of movement, or total inability to stand. With the addition of the anesthesia, the symptoms are not unlike those of ataxia, which in its ordinary form appears to be comparatively rare in woman. In one case there was hyperesthesia. In nearly all the cases the liver has been enlarged; there has been sickness, and all the other usual signs of chronic alcoholism. I alluded in my lecture to the existence of pains in the limbs from which drunkards often suffer before any marked signs of paralysis have shown themselves.

As regards treatment, this is hopeful, and should always be attempted; for I think it must be confessed that it is impossible to tell what kind and amount of change has occurred in the centres to produce paralytic symptoms. If the patient be young and the tissues not much degenerated, I should recommend the ordinary treatment, and especially such medicines as the iodide or bromide of potassium, before commencing galvanism and a tonic course. What, however, I would especially insist upon is the removal of the primary cause of the complaint. This seems

a common sense recommendation ; but, I am sorry to say, is one not always enforced. Sometimes the reason is that the doctor fears for his position as health-proprietor of the family, should his hints be offensive, or he has not moral courage to unfold an unpleasant truth. Sometimes, however, he will most conscientiously refrain from recommending a discontinuance of the alcohol for fear of the results, such as the sudden dissolution of the patient, or an attack of delirium tremens. He need not have the slightest fear on these grounds, for no harm, but only good, will ensue from its withdrawal. I am aware that opinions are at variance in this matter, but nevertheless I enforce my own views strongly, with a large amount of experience to support me. I have never yet seen a person die or suffer from delirium tremens or any other disorder in consequence of the complete withdrawal of alcohol when the system was being poisoned by it. On the other hand, I have seen such remarkable recoveries after its total discontinuance as would certainly surprise those who had never ventured upon this plan. I have seen persons, more especially ladies, lying on their beds surrounded by friends waiting for their last moments, where scarcely a mouthful of food had been taken for months, where the prostration, increased by urgent sickness, was extreme, and where they were constantly plied with brandy to keep them alive a little longer, and yet in such cases, where the diagnosis was clear, from the blood of the patient being overcharged with poisonous elements, and the room stinking with the fetid vapors of the body, I have recommended a withdrawal of every drop of the so-called "stimulus," and with effects more marvelous than any one who has not adopted the plan can conceive. Unfortunately these cases of alcoholism are so bound up with moral considerations, and in women so often associated with bodily or mental suffering, that it is most difficult to publish them in all their details. Three cases which I have witnessed during the last year have made a great impression upon me. A lady, not far from my residence, the unfortunate subject of alcoholism, and having considerable weakness of the legs, was reduced at length to the utmost stage of prostration by want of food and constant retching. A little brandy was put from time to time between her lips, in order, as was hoped, to eke out her existence a little longer. The end apparently approaching, straw was laid down in front of the house, and her children were sent for in order to take a final farewell, when, after repeated urging on my part, all stimulants were suspended. The sickness soon ceased; the blood became gradually depurated; after a few hours a little food was taken; and in a fortnight's time this lady was sitting at the dinner-table with her family. I can say nothing, of course, about the likelihood of relapse, as this opens up another subject. But lately, also, I have been seeing a tradesman and his wife, with Mr.

Joyce of Nottingham, both of whom were addicted to intemperate habits, and both, most remarkably, had almost complete paraplegia. We prevailed on the husband to relinquish his drink, and he began at once to improve; but we had no influence on the female, who was approaching the state of delirium tremens. In another case, that of a medical man, who, after drinking hard, became so ill that he took to his bed, had epileptiform attacks, and was constantly retching, his wife standing over him administering brandy and champagne from time to time to keep him alive a little longer, I succeeded, after several attempts, in inducing his wife and two medical attendants to stop every drop of alcohol. When this was done the patient soon cried out for drink; but, after imploring in vain for some time, he was violently sick, and then sank into a sound sleep. Upon waking he took a little beef-tea, in a few hours ate some solid food, and within a week was back again in his practice.

I do not wish to discuss in this place the merits of alcohol as a remedy, as it is one I constantly use with the utmost advantage; but simply to state my experience that I have never seen the slightest harm accrue from the sudden deprivation of the accustomed stimulus, but, on the other hand, have had the satisfaction of knowing that I have saved fellow-creatures' lives as certainly as if I had plucked them drowning out of the water. I cannot conceive what the objection is to the withdrawal of the alcohol under the circumstances I mention, any more than I can conceive why, when the system is saturated with poison, and the patient dying from the effects of it, such a gross burlesque on the homeopathic doctrine should be practiced as to continue administering it. The purport of this paper is more especially to draw attention to the paralysis, and more particularly spinal paralysis, occurring as a result of alcoholism; and therefore that when a medical man is called in to see a case of this kind, he should remember intemperance in drinking as a possible cause, just as he would if he found an enlarged liver.

If the affection should turn out to be in any way peculiar in its pathology it will certainly deserve a distinct appellation; but even should the morbid changes in the cord, together with the resulting symptoms, resemble what is seen in other forms of paralysis, I would still recommend the adoption of such a term as alcoholic paralysis as significant of its cause, for we are warranted in so doing by the use of the expression puerperal, syphilitic, or uræmic epilepsy (eclampsia) in reference to the origin of the fits when arising under special circumstances.—*London Lancet.*

EPIDERMIC CEREBRO-SPINAL MENINGITIS.

The following are extracts from an Essay read before the Medical Association of North-eastern Ohio, by S. Hudson, M. D. of Medina, Ohio.

* * * The disease generally prevails in the winter, or colder months of the year, showing that it is not caused by malaria; indeed, I have never known it to prevail in miasmatic or malarious districts as an epidemic. Whether it is contagious or not is not definitely settled, much difference of opinion existing upon this point.

As to its pathology, I believe it is admitted by all to be an inflammation of the meninges of the brain and spinal cord; and this inflammation varies from the highest, or sthenic, to the lowest, or asthenic, type; both of these conditions obtaining sometimes—at different periods of the disease—in the same person. Such was the character of most of the cases in the epidemic that occurred in Medina, Ohio, during the winter of 1863-4, the mortality of which was about 80 per cent.

I come now to the most interesting question connected with the consideration of this disease, *i. e.*, What is it?—what is its true nature? I answer, that after close observation and treatment of many cases, I have had the conclusion forced upon my mind that *epidemic cerebro-spinal meningitis* and *epidemic erysipelas* are one and the same disease. In other words, that cerebro-spinal meningitis is nothing more than an erysipelatous inflammation of the meninges of the brain and spinal cord. My reasons for this opinion will appear before I close, and it is for you to judge if they be valid.

The symptoms of the disease vary much in different cases. Sometimes the attack is so sudden that the patient is found insensible, and so continues until death; but, as a general thing, several days' indisposition, accompanied by cephalalgia, precede the full development of the malady, which is ushered in by a chill of more or less intensity and duration. I have known these chills to vary from slight chilliness to an attack so severe that the patient succumbed without reaction ever taking place. Reaction, however, usually occurs; febrile symptoms manifest themselves, and you shortly after discover that your patient has hemiplegia; or is blind; or perhaps deaf; speechless, with contracted pupils; opisthotonos, or convulsions, may follow in rapid succession, and of the most alarming character; tongue covered with a moist white coating; bowels usually constipated; incessant vomiting. Retention of urine is very frequent, as is also dysphagia. In other cases, the patient complains only of headache; is inclined to sleep most of the time, the drowsiness finally passing into coma, with stertorous breathing, in which condition he dies.

In the cases which came under my notice, the most of them had, at the onset, a peculiar lazy, sluggish character of pulse, more easily recognized than described. In many of the cases I was enabled to make my diagnosis at once from the peculiar condition of the pulse. In the most malignant cases the patients would not survive the attack more than thirty-six to forty-eight hours, though some would linger four or five days; when they lived longer than this, they would sometimes last as many weeks. Two of apparently the most severe cases we had, lingered between death and life for some six months, and both finally recovered.

I would now invite your attention to a brief description of an epidemic that visited our place in the winter of 1863-4. Early in the winter, an epidemic of erysipelas made its appearance. Many died, for it was phlegmonous erysipelas prevailing as a malignant epidemic. In some cases the patient would be taken with a pain in the end of a finger or toe, and die within forty-eight hours, without any external appearance of the erysipelas. In others the disease would affect the bowels, brain, or spinal cord, and the patient would die in a few hours.

During the prevalence of this epidemic, I was shocked to learn that one of our country officials was thought to be dying, and of a new disease. Through the kindness of friends I was invited to see him. His physician had diagnosticated a congestive chill. I found him *in articulo mortis*. From his appearance, and the history of the case, my diagnosis was cerebro-spinal meningitis. His body was slightly covered with petchiæ, facial muscles contracted, head thrown back, and pupils dilated. Duration of the disease, forty-eight hours.

Following this case came others, thick and fast, of as great or lesser intensity, but of the same general character. I will relate the prominent points of a few of them:

Case I.—Mrs. B——, taken with chill on the 4th of February, 1864, which last twelve hours. As soon as she reacted from the chill, her respiration went up to fifty per minute, while the pulse was heavy and sluggish at forty to the minute. She soon became insensible, and went into a deep, heavy sleep, from which she could with difficulty be aroused. This state continued until about noon the next day, being the fifth from the attack, when she partially aroused, and would answer questions, though not always correctly. Now her pulse became more rapid, her breathing less so; her stomach would tolerate nothing, and the characteristic pea-green vomit occurred. These symptoms occurred during the day, with bowels constipated, retention of urine, some opisthotonos, pupils contracted, and partial hemiplegia of the left side, her body slightly covered with petechiæ. Consequently I diagnosed spotted fever, or cerebro-spinal meningitis, and so informed her friends. There was no abatement in

the severity of the symptoms until the morning of the seventh day, when I found her apparently much better. The nurse pulled down the bed clothing, and said, "Here, doctor, is your spotted fever, or cerebro-what-do-you-call-it!" And sure enough, what did I call it? A more well defined and plainly marked case of phlegmonous erysipelas I never saw. The lady in attendance said: "Doctor, I thought *you* had seen enough of erysipelas to know it from spotted fever." The neck of the patient, both back and front, as well as the anterior portion of her chest, was completely covered with an erysipelatous blush, which was persistent for seven days, when it was followed by desquamation of the cuticle, but by no cellular-pus formation, of which I had grave apprehensions.

After a lingering illness the patient recovered. I had here, primarily, as well marked a case of cerebro-spinal meningitis as I ever saw (and I have treated a great many cases of it); her symptoms were almost identical with those of others who were, at the same time, suffering from the disease, and dying almost daily.

Case II.—The next case was that of Miss R——, aged 21, living but a few steps distant from the house of Case I. She, too, had rigors, which lasted, in her case, some fifteen hours. Reaction came on slowly, followed by vomiting, as in the other case; pulse slow and heavy; respiration very rapid; stomach would retain nothing. Hemiplegia of left side on the second day; she was deaf, blind, and speechless; pupils contracted; bowels constipated, and the urine retained. Diagnosis: spotted fever. (This was before my other case "went back on me," as they were attacked at nearly the same time.) As no external erysipelas appeared in this case, my diagnosis stood approved. After many weeks this case also recovered.

Cases III. and IV.—In the family of Miss R—— two younger brothers were taken down within a few hours of their sister's attack, both of whom had phlegmonous erysipelas of scalp and face, and recovered in three or four weeks.

* * * * *

I might multiply cases, but suffice it to say that parallel ones to those cited were numerous, not only in our own village, but all through the adjoining townships. It was no uncommon occurrence for one member of a family to have cerebro-spinal meningitis, and in less than twenty-four hours another would be taken down with erysipelas. In other cases the disease would commence as cerebro-spinal meningitis and terminate as erysipelas (as in the case of Mrs. B——); in still another class, a case of erysipeles of face and scalp would be progressing favorably, when suddenly the eruption would fade, and the patient would die with all the symptoms of spotted fever. In others yet, the attack would be upon the extremities, and so severe would be the pain that it was almost impossible to miti-

gate it; this would continue from twenty-four to forty-eight hours, when metastasis to the brain or spinal cord would occur, and the patient succumb within a few hours.

Those of my medical brethren who have passed through one or more of those terrible epidemics of erysipelas which have visited Northern Ohio at several times and in numerous places since 1842, will doubtless call to mind many such cases as I have described.

These cases are of importance, as I believe it is admitted by all writers on epidemic erysipelas, that there are scarcely any tissues of the body exempt from its invasion; that the meninges of the brain and spinal cord, the thoracic and abdominal viscera, skin, muscles, nerves, and bones, may, any or all of them, be the seat of this disease.

Another point favoring the idea of the identity of cerebro-spinal meningitis and epidemic erysipelas, is their frequent simultaneous appearance and identical symptoms of invasion. In 1864, after being deceived a number of times, I was more cautious in my diagnosis, for I could not tell, at the onset of the disease, whether it would show itself externally or not. As spring came on, the disease relaxed in severity, but up to the last cases, preserved its erratic course as to external manifestations.

From 1864 to 1871 we were free from a visitation from this scourge, but on the 9th of December, 1870, it re-appeared, selecting as its first victim a little son of my own, aged 8 years. He had pain in his ankle, of unusual severity, following a slight chill. I suspect rheumatism, and so treated him for a short time, but on testing his urine, and finding no excess of uric acid, and the excruciating pain continuing despite my opiates, I called in my friend Dr. Hard, but we were unable to make a satisfactory diagnosis.

The fourth, fifth, and six days, the pain increased in severity until the poor child begged us to kill him and end his suffering. The leg now for the first time was slightly swollen, and the least jar would almost throw him into convulsions; bowels constipated, and urine scanty; pulse nearly normal.

On the morning of the seventh day I saw, to my sorrow, that the meninges of the brain and cord were affected; then followed, in rapid succession, the symptoms usually attending meningitis, and in about twenty-four hours he expired.

The next case in this epidemic was that of Mrs. W——, aged 35, living but a few doors from my house, and attacked shortly after my boy. Pain in the ankle, identical in character and severity with that of my son, until the third day, when her foot and leg took on an erysipelatous inflammation, which lasted eight or ten days, when she slowly recovered. This was a well-defined case of phlegmonous erysipelas, but had the disease in-

vaded the crebro-spinal meninges, as it did in the preceding case, instead of coming out on the leg, it would have been recorded as one of spotted fever.

I have not time to make special report of all the interesting cases that fell under my observation last winter (1871); they were numerous, and of the same general character as those of the epidemic of 1864, and Dr. Hard and myself had the misfortune to treat nearly all of them.

Our cases of pneumonia, several of them, after becoming convalescent, suddenly went off with brain-trouble, with all the symptoms of spotted fever. This was the case in both epidemics spoken of; and our measles patients fared but little better. Indeed, there seemed to be a tendency to brain-trouble in every form of disease with which we had to contend. * *

PLASTIC SURGERY.

By CHARLES B. BRIGHAM, M. D., of San Francisco.

Of all the operations which ancient or modern surgery can boast of, there is none which so nearly realizes the object of the art, or which gives so much satisfaction to the patient or to the surgeon, as that of restoring lost parts of the body. In the lower forms of life the repair and restoration of entire extremities is possible; the eye may be restored in the crab, the leg or tail to the newt, and in general, the lower and simpler the animal life the more ready and perfect the restoration. Not so, however, with human beings; their means of repair are very limited; small portions of the skin, if lost, are replaced by a substance inferior in many respects to the original; cartilaginous tissue is replaced by a fibrous callous, while the cicatrix of tendons becomes identical with them only after it has undergone many changes through lapse of time. The nails, hair and bone have each their special conditions under which they are reproduced, and the epidermis and epithelium seem to be the only substances that are freely regenerated. The restoration of skin by plastic surgery may be accomplished in three ways, viz: by transplanting:

1st. Small bits of the epidermis, fixing them in the raw surface of the tissue to be repaired.

2nd. Wholly detached portions of skin of greater or less size.

3rd. Portions of skin attached to the neighboring tissue only by a small isthmus called the pedicle.

The first process was presented to the medical profession a few years ago, by M. Reverdin, of Geneva. He discovered that small pieces of epidermis, when inserted among the healthy granulations of an ulcer, and kept in place, would live and grow and

form little islands of skin, becoming the centres whence cicatrization of the entire granulating surface was accomplished.

In a case reported in 1870, by Mr. Young, of St. Bartholomew's Hospital, in London, small bits of skin were planted in the granulating surface of an ulcer; six weeks gave them the size of a half a dollar, four weeks that of a quarter, while a fortnight that of a five cent piece.

Again, a gentleman connected with the same Hospital made the following experiment:

"On Saturday, December 17, 1870, an arm was amputated at St. Bartholomew's Hospital, at 2 P. M.; at 6 P. M. Mr. Cumberbatch entered the theatre, four hours after the operation, and took from the limb, which was then quite cold, a portion of integument. He cut it up into small pieces, which he transplanted in the usual way. After bandaging the part, he opened the wound on the fourth day and found that union had taken place, and that cicatrization was going on favorably from the various points; the case terminated favorably."

The second process, that of transplanting wholly detached portions of skin, has been hinted at in surgery for many years; ends of fingers, noses and ears, completely cut off, having been successfully united to the original members by applying them immediately after the injury. Sixteen successful cases of this sort are reported by Hoffacher, the surgeon officially appointed at Heidelberg to dress the wounds from duels among the students.

While at London, in the spring of 1872, I had the opportunity of seeing at one of the hospitals the perfect union of a finger which had remained during nineteen minutes completely detached from the hand near the second joint.

Chelius mentions the case of a student, who, having his nose cut off by a sword, re-applied the part nearly an hour after the accident, and it reunited perfectly. These striking hints were not made use of, however, in plastic surgery until recent years, when Ollier in France, Bunker in Germany, and among others Toland, in our own country, made successful experiments with pieces of skin taken from different parts of the body, and applied to the granulations of wounds or ulcers. Bunker relates a case of partial success in the formation of a new nose on a lady by a piece of integument completely cut away from the thigh.

During the Franco-German war, in the winter of 1870, a patient came under my charge, suffering from the loss of an eye and lower eye-lid, from a gunshot injury; a successful attempt was made to restore the lost lid by a flap of skin taken from the temple, according to the third process. A fistulous opening into the lachrymal duct remained, however, and on the third of July, 1871, I took a piece of skin, half an inch square, from the breast of his room-mate, and placed it in the wound over the

fistulous opening; it was hardly a fair trial, and the same cause that made the flap refuse to unite over the fistula, had its effect upon the bit of skin, and it perished. Shortly afterwards the irritation caused by the dead tissue was such that the borders of the wound took on an increased action to get rid of it, and thus became united.

Alphonso Guerin, in an article published in 1866, speaks of this second process as a well established fact, and calls it *heteroplasty*; at the same time he jestingly alludes to the idea of Van Helmont, that on the death of the individual from whom the bit of skin was taken, the detached piece would die also from sympathy.

The English surgeons do not seem disposed to practice this operation. Holmes Coote, in speaking of the re-union of completely sliced-off portions of the nose, ears, etc., says: "No such license can be allowed in plastic surgery; the flap must retain its connection to the adjacent living structure by a pedicle, which is to be severed only after complete union and cicatrization of the raw surfaces."

At a recent meeting of our State Society, at Sacramento, Prof. Toland exhibited the colored drawings of a remarkable and successful case of plastic surgery, the operation having been made according to the second process.

The third process, that of transplanting partly detached portions of skin, has been practised from time immemorial by the Koomas of India. Their original method was to take a flap of skin in close proximity to the part to be restored. It is supposed that their invention became known in Europe by being transmitted to the Arabs and thence to the Spaniards and Sicilians. In the middle of the fifteenth century, a Sicilian named Branca conceived the idea of taking portions of skin remote from the tissue to be restored, and he operated successfully in taking the partly detached integument of the fore-arm. The idea is almost universal that Tagliacozzi, of Bologna, was the original inventor of this operation, and in the university of that famous city a marble statue holding a nose has been erected to his memory. This Italian method of operating is resorted to now-a-days only as a matter of necessity; its tediousness for the patient is beyond description. It is, indeed, exceptional that enough skin cannot be found in the face to remedy a deformity of the nose, mouth, or eye-lid—its tissue is so elastic that it can be put to the stretch with a very favorable result. The Indian method, then, is the one oftenest employed in remedying deformities of the face from loss of integument. Another method, called the French, consists in rendering the skin less tense, and the edges of the wound better able to approximate themselves by subcutaneous division, or by cutting the skin in lines at certain intervals, and in leaving these lines gaping wounds to granulate.

Those familiar with the operation of crimping a codfish can readily imagine the appearance of an extensive operation of this sort. It is astonishing to see how great a tension of the skin is sometimes relieved by a small incision practised in the right place. The French method finds itself usefully applied in many cases.—*Western Lancet*.

MEDICAL GLEANINGS.

FRAENKEL ON PLACENTAL SYPHILIS.—Dr. Ernest Fraenkel (*Archiv für Gynaekologie*, April, 1873), in a most interesting and exhaustive paper on this subject, illustrated by some well-executed plates, and recording in detail the particulars of more than twenty cases, arrives at the following conclusions:

1. The placenta may become syphilitic, and there are certain characteristic indications of this.

2. The syphilitic placenta occurs only in hereditary or congenital syphilis in the foetus.

3. The seat of the disease is different, according as the mother remains healthy and the syphilitic virus is communicated directly from the father to the ovum by means of the spermatozoa, or according as the mother is diseased.

In the former case, the affected foetal villi of the placenta degenerate through cellular granulation, with consecutive obliteration and atrophy of the vessels, complicated frequently by marked proliferation and condensation of the epithelial covering of the villi.

4. In the second case, when the mother is syphilitic, the three following conditions are possible:

a. The mother, through the act of impregnation, is simultaneously affected with syphilis with the foetus; diffused syphilis of the placental villi may then develop itself, but primary infection of the maternal parts—endometritis placentaris—is not excluded.

b. The mother has been infected with syphilis before or shortly after conception. The placenta may remain normal, or become diseased under the form of endometritis placentaris gummosa, or (according to Virchow) in a narrower sense—endometritis decidualis.

c. The mother becomes infected only during the latter months of pregnancy (seventh to tenth month). It then generally happens that, in case the father was healthy at the time of impregnation, the foetus as well as the placenta are exempt from the alterations described above.

5. The infection of the foetus by passing through the genital canal of the mother is rare, and not yet proved beyond doubt.

THE BLOOD IN RELAPSING FEVER.—According to the observations of Obermeier (*Medical Times and Gazette*, March 29, 1873), the blood of persons laboring under relapsing fever contains peculiar filiform bodies, which exhibit very active spontaneous movements. A drop of blood extracted from such a patient, and mounted, as usual, with the necessary precautions, presents these bodies among the corpuscles when magnifying powers of 400 to 900 are employed. They appear as extremely delicate threads of the thickness of a fibrous filament, and of the great length of one and half to six times the diameter of a red blood-corpuscle or more. Several of the bodies may be seen on the field at once; and so long as the preparation is fresh, they exhibit active movements,—not only changes of form, moving and alternately coiling and uncoiling, but also changes of locality, by which they slowly or suddenly escape from the field of view. Altogether, the movements remind one of spermatozoa. Hitherto, Obermeier has found these filaments during the fever only, and shortly before or during the crisis,—not in the interval. Sometimes they are to be seen one day, and not the next. He could not find similar bodies in the blood of healthy persons, or of persons suffering from other diseases. Of their nature, he will not yet give a decided opinion.

CHANGE OF COLOR IN THE HAIR (*Lancet*, May 7).—Several historical and well-known cases (as those of Maria Theresa, Ludovico Sforza, and Mary Stuart) corroborate the simple but affecting statement made by the Abbe Lefevre the other day in the Tichborne trial in reference to the sudden change of color his hair had undergone. He had heard, he said, of the death of his father, and on the following night dreamt that the details of his death were enacted before his eyes. He awoke terribly agitated, and found that his hair had become white. A curious instance lately came under our observation, in which a black retriever puppy received a violent kick from a horse, which caused fracture of the thigh. By the time the fracture had united, the dog's hair had changed from a deep black to a light brindle. The dog is now fully grown, but the hair has not recovered its original color.

To what can this change be attributed? The answer is not easy. Is it due to the extrication of air? Is it a consequence of the absorption of pigment, or the result of the action of some chemical compound, as an acid, eliminated by the skin? Under any circumstances it is singular that the influence should be limited to the hairs alone, and should not, apparently, otherwise affect the integument. The circumstances under which it usually occurs point to the nervous system as a principal agent, and this is supported by the occurrence of white hairs in the eyebrows and temples after severe attacks of neuralgia. Still, it

may be asked, is it an instance of the direct action of the nervous system upon the hair-cells, or indirect upon the vessels of the surface? It would be interesting to know how the white color makes its appearance—from the apex to the root, or *vice versa*.

THE CAUSE OF COLLAPSE IN DIPHTHERIA.—Professor Mosler, of Greifswalde, has published two cases of sudden collapse during apparent recovery from diphtheria. They give a somewhat different theory for the cause of death than has been urged by Trousseau. In fact, this complication is barely mentioned by the latter author. Niemeyer describes such cases as those whose general condition has not excited much apprehension, or, in fact, has been regarded as satisfactory until, without warning of any kind, they fell into a collapse. In other cases still, profound syncope has occurred a number of times, at last ending in death.

A great deal of discussion has taken place with regard to the implication of the nervous system in the pathological changes, but in many cases no lesion whatever could be discovered. Wagner was the first to call attention to the fact that, in these cases, there was usually some change in the muscular tissue of the heart.

In the two cases cited by Mosler, collapse was sudden and unexpected, the first taking place on the fifteenth, and the second on the fifth day. In both of them the walls of the heart were found dilated, and the seat of fatty degeneration. The trabeculæ, in each case, were flattened down.

The author makes the practical deduction that this demonstrates how necessary it is to adopt a tonic and stimulant method in treating this disease.—*Medical Record*.

SPONGE-TENT IN EPISTAXIS.—Dr. James Young (*British Medical Journal*, May 17, 1873) recommends the use of sponge-tent in cases of bleeding from the nose, and gives the following method of preparation: "Have a long piece of fine sponge, dipped in a solution of gum, compressed with twine, dried; and, after the twine has been unrolled, the sponge is thickly coated over with white wax. This is easily passed along the floor of the nostril, leaving a piece of red tape for extraction. The tent may remain for six hours, and must be gently rotated before extraction, to prevent fresh hemorrhage."

THE PATHOLOGY AND TREATMENT OF HOOPING-COUGH.—In a paper published in the *Swiss Correspondenzblatt* of April, 1873, Dr. Rudolf Meyer, of Zurich, gives an interesting account of some auto-laryngoscopic observations he made whilst suffering from a well marked attack of this disease. He found the mucous membrane of the under-surface of the epiglottis, and of the adjoining parts of the entrance into the glottis, and

especially that covering the so-called arytaenoid cushion, swollen and red, whilst that of the adjoining parts of the pharynx was also distinctly inflamed. The vocal cords and the lateral and internal parts of the larynx were normal. The inflamed parts were highly sensitive, the least touch bringing on spasmodic cough. In another case, occurring in a middle-aged woman, the same conditions were ascertained to be present. Dr. Meyer effected a cure in his own person in a few days by insufflating some powdered alum; but on trying the same plan with the lady, retching was induced, and he was obliged to use solutions of alum and tannin, which proved successful, though less rapid in action. The plan suggested by Dr. Meyer may be carried out with advantage in adults who are steady, but it is difficult to see how it could be applied in children.

Book Notices.

CHEMISTRY—General, Medical, and Pharmaceutical, including the Chemistry of the U. S. Pharmacopœia—a Manual of the General Principles of the Science, and their application to Medicine and Pharmacy. By JOHN ATTFIELD, Ph.D., F. C. S. Fifth edition, revised from the fourth (English) edition by the author. 1873. 12mo.

The fact that this work has reached a fifth edition is evidence quite conclusive that it is held in high esteem. It is certainly one of the best, if not the very best, manual for medical students with which we are acquainted. It is of convenient size, and yet not a single fact is omitted that would be essential to the student, physician, or pharmacist.

From other chemical text-books it differs in three particulars: 1st, in the exclusion of matter relating to compounds, which, at present, are only of interest to the scientific chemist; 2nd, in containing more or less of the chemistry of every substance recognized officially, or in general practice, as a remedial agent; 3rd, in the paragraphs being so cast that the volume may be used as a guide in studying the science experimentally.

CONTRIBUTIONS TO PRACTICAL SURGERY. By GEORGE W. NORRIS, M. D., late Surgeon to the Pennsylvania Hospital. 8vo. Pp. 318. Philadelphia: Lindsay & Blakiston. Cincinnati: R. Clarke & Co. 1873.

We have no doubt the work before us will be found of great practical value to those of the profession who are interested in fractures and dislocations, deformities, etc. In works of the kind the few subjects can be treated at much greater length and more thoroughly than they can be in the mere text-books of the whole field of surgery; and besides it is presumed that the subjects treated have been special objects of study with the author.

The first 111 pages are devoted to the consideration of the occurrence of non-union after fractures. This is certainly a very important de-

partment in surgery, and is of interest to every practitioner. Who is there who does not meet with more or less of these cases?

The next subject treated at considerable length is the treatment of deformities following unsuccessfully treated fractures. Then we have statistics of fractures and dislocations discussed. Following is the discussion of compound fractures; and then the mortality following ligatures of arteries.

We have no doubt of the favorable reception of the work by every one in whose practice surgery at all enters.

The mechanical execution of the work by Messrs. Lindsay & Blakiston is very beautiful. It is printed on tinted paper of the best quality, and the type is good.

PHARMACEUTICAL LEXICON: A Dictionary of Pharmaceutical Science, containing a concise explanation of the various subjects and terms of Pharmacy, with appropriate selections from the Collateral Sciences; formulæ for officinal, empirical, and dietetic preparations; selections from the prescriptions of the most eminent physicians of Europe and America; an alphabetical list of diseases and their definitions; an account of the various modes in use for the preservation of dead bodies for interment or dissection; tables of signs and abbreviations, weights and measures, doses, antidotes to poisons, etc. etc., and, as an item of curiosity, a few leaves from a dispensatory published in the 17th century. Designed as a guide for the pharmacist, druggist, physician, etc. By H. V. SWERINGEN, member of the American Pharmaceutical Association. Philadelphia: Lindsay & Blakiston. Cincinnati: R. Clarke & Co. 1873. 8vo. Pp. 576.

The very lengthy title of this work exhibits its scope. Part 1, occupying over 400 pages, is made up of the lexicon, and in this is a brief but very good definition of all pharmaceutical preparations, instruments, etc. etc. This we regard as the most valuable part of the work, although the other is certainly very valuable.

The idea of the author in undertaking the work was suggested by the difficulty which had, in common with many pharmacists, frequently attended his efforts to gain *immediate* information upon many of the innumerable and varied topics of professional inquiry.

We have no doubt it will be highly appreciated by those for whom it is designed.

Editorial.

CINCINNATI COLLEGE OF MEDICINE AND SURGERY.—The Annual Announcement of this institution will be found bound in the present number of the NEWS. We understand that the prospects of the coming term of Lectures are especially good. An unusual number of letters of inquiry and of requests for Announcements are being received by all the members of the faculty.

It will be observed that Prof. C. A. STUNTZ, A. M., Ph. D., has been appointed to the Chair of Chemistry. Prof. Stuntz has been for a long time a teacher of chemistry in one of the principal institutions of learning in Cincinnati, and his appointment is a guarantee that the chair will be filled in the most satisfactory manner.

Dr. S. W. CRAIG has been chosen Demonstrator. Dr. Craig has for

a long time been devoting himself to the study of anatomy, and students will find him a most competent and efficient demonstrator.

The Professor of Surgery will have the assistance of Dr. JULIUS WISE as prosector, and we have no doubt his services will be of the greatest advantage.

Additions to the museum are constantly being made by the highly efficient Curator, Prof. AMICK, and there is every reason to believe that quite soon it will not be in any respect inferior to any museum of the kind of any medical college in the country, east or west. It already contains, in anatomy and pathology, a number of very rare specimens.

The means of illustration by the various chairs are also being largely added to, and it is expected that soon in this respect, this school will be pre-eminent. Already there has been collected a larger number of microscopical slides, for illustrating microscopical anatomy and pathology, than is possessed by any other medical college in the United States.

The friends of the school can feel assured that the trustees and faculty will spare no pains to make the *Cincinnati College of Medicine and Surgery* at least the leading medical college of the west.

HONORS.--It affords us pleasure to inform our readers that NATHAN ALLEN, M. D., of Lowell, Massachusetts, a contributor to the MEDICAL NEWS, had conferred on him the degree of LL. D., at the late annual commencement of Amherst College. We are sure the compliment is one well deserved by the recipient, as his contributions to the leading scientific and literary journals of this country and Europe prove him to be beyond doubt a man of profound learning. It is not often that physicians have conferred upon them the degree of LL. D., preachers and lawyers generally being the recipients of it, and, therefore, when they do, there is the more reason to believe that it is deserved.

DIFFICULTY IN THE MEDICAL COLLEGE OF OHIO.--As announced by the daily papers of this city, trouble has sprung up between the faculty of the Ohio College and the Board of Trustees of the same. It seems that some weeks ago that Dr. C. D. Palmer, a member of the Hospital staff, was announced in the *Clinic* as Professor of Diseases of Women and Children, and afterwards in the Annual Announcement. This was by virtue of an election by the faculty alone, in which he obtained one majority--his name not having been submitted to the trustees for confirmation. The trustees, becoming indignant that an individual should be announced as filling a chair whose name had not been presented to them for confirmation, for it is plainly laid down in the charter that the faculty can only nominate to the board, and that the latter must confirm before an election can take place, at a following meeting, passed a resolution of censure of the action of the faculty. At a subsequent meeting, when Dr. Palmer's name was submitted to them with an imperfect apology, they refused to confirm him. Still later, when his name was again offered, the subject of his confirmation, after a spirited debate, was laid upon the table.

At this point, at the present writing, the matter stands, and will be apt to continue so for a time. What will be the solution of it we do not know. The faculty have had the statement published that a harmonious understanding had taken place between them and the trustees; but that is *not true*. We have stated the facts as they are--we have only omitted the criminations and recriminations, the bickerings and quarrelings.

We are surprised at Dr. Palmer continuing a candidate for a chair which nearly half the faculty are opposed to his filling, and after the

trustees have at two different times refused to confirm his nomination by a bare majority of one. Not very long ago a Kentucky gentleman succeeded in forcing himself into a faculty of this city, in which he had but one majority in the faculty and the same number in the board of trustees, but he was only able to hold his position for a single session, when he was compelled to retire under humiliating circumstances. We feel surprised at the course of five men in insisting in forcing a man into their faculty that four of their number are opposed to.

Dr. Palmer gave up his position upon the staff of the Cincinnati Hospital so soon as he was elected, as he thought, a member of the faculty of the Ohio College by five of the faculty, and the place was immediately filled by the election of Dr. Tate.

WOMEN IN HOSPITALS.--The vexed question of women in medicine—her present and future—is a rather warm one for a season so close to the dog-days, but we learn from the *London Lancet* that admission has been demanded, by some of the advanced thinkers of Birmingham, to all the advantages offered by the Medical School of Queen's College; and that, while the proposal has met with a favorable consideration from the teachers of the school, the students are opposed to it. The *Lancet* thinks that neither the parents of the young gentlemen nor the patients of the hospital have been consulted, and, after asserting that they ought to be, says:

"We wish to know whether the male patients of the Birmingham charities are prepared to have catheters passed, hydroceles tapped, or hernias manipulated by the hands of *female* students; for, unless they are, those ladies cannot properly learn their work. We quite agree with the writer we have already quoted when he says:

"Female practitioners can never be of any use whatever to the public unless they go through exactly the same training, both mental and moral, as their male competitors; and, as in after-life they can never practise any department of the profession isolated from men, it is absurd that they should start and spend the most important part of their professional existence apart from them."

"All this is perfectly true; but, so long as human nature is what it is, we do not believe decent men will willingly submit to surgical treatment at the hands of the opposite sex."

We ask, Why not? *Chacun a son gout.*

And so said a female medical student, in a communication published in an issue of the *Lancet* subsequent to that from which the above quotation is taken; whereupon the editor of the *Lancet* replied:

"We regret to have to put our statement more forcibly and plainly than we did before, but the extreme ignorance or innocence of our correspondent demands it. Our view is that 'so long as (masculine) human nature is what it is,' we do not think male patients can be submitted to manipulative examination by female students without the risk of an involuntary manifestation of excitement which would be painful to both parties."—*Med. Times.*

M. GUERSANT'S death is attributed to syphilis, contracted through a wound in his finger while operating upon a patient affected with that disease.

FECUNDITY OF THE MULE.--A case of exceptional fertility in this hybrid, says the *Medical Times*, is mentioned in the *Gazette Hebdomadaire de Medicine* for March, as having occurred recently at Orleans-

ville, in the department of Algiers. A mule has given birth to a young mule perfectly formed. The medical men of the place have ascertained the fact, of which, indeed, many other examples have been recorded. What would especially be interesting would be to know whether this young mule will be fertile.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA.—We have a copy of these Transactions, forming a pamphlet of some 500 pages. It contains the address of Pres. Cummins; a paper on New Medical Remedies, by Dr. S. S. Jepson; a paper on New Surgical Remedies, by Dr. J. H. Pipes; Report of the Committee on Necrology; Necrosis of the Thigh Bone, by Dr. I. T. Nicklin; Report of the Committee on Medical Botany; Topography and Epidemic Diseases of some three counties, by Dr. W. H. Sharp; Case of Fracture of the Skull, by Dr. Helzin P. Davis; and some three or four other papers.

The Society met at Parkersburg, June 4th, with a good attendance. The following officers were elected for the ensuing year: President, Dr. M. S. Hall; 1st V. Pres., Dr. A. L. Knight; 2nd V. Pres., Dr. T. A. Harris; 3rd V. Pres., Dr. J. M. Cooper. Treasurer, Dr. John C. Hupp. Secretary, Dr. Wm. M. Dent.

The Society seems to be in a flourishing condition. We would suggest to them that each annual report should contain a full and accurate list of members. The reasons are many and quite manifest.

BRAITHWAITE'S RETROSPECT.—The July number, Part lxvii, of this valuable half-yearly, is received. It is filled with its usual large amount of valuable selected matter from all the principal medical journals of the world.

At least one half-yearly should be taken by every one, and there is no better one than *Braithwaite's*. Published by W. A. TOWNSEND, New York, at \$2.50 a year.

THE POPULAR SCIENCE MONTHLY, conducted by E. L. YOUNG, for August, is received. Contents are: Electric Telegraphs, by Prof. A. P. Deschanel (illustrated); The Study of Sociology—Discipline, by Herbert Spencer; Footprints on the Rocks, by Prof. Charles H. Hitchcock (illustrated); The Nature and Influence of Foods, by Dr. Edward Smith; Lunar Temperature; The Problems of the Deep Sea, by Prof. T. H. Huxley; Condensed Milk in England, by Dr. Edward Lankester; Lowly Vegetable Forms, by Rev. Hugh Macmillan; The Weather and the Sun, by Richard A. Proctor; Orientals at Vienna; The Morbid Effects of Heat, by Dr. Wm. J. Youmans; Sketch of Prof. Coffin [Portrait]; Correspondence: Hydrophobia an Actual, not always an Imaginary Disease—The Transfusion of Blood; Editor's Table: Science in Educational Discipline.

The Popular Science Monthly is published in a large octavo, handsomely printed on clear type. Terms, five dollars per annum, or fifty cents per copy.

WOOD'S HOUSEHOLD MAGAZINE.—We have received the August number of this excellent magazine, and we find its contents fully up to those of the past. We are surprised that every one does not take it, for it affords almost as much reading matter as the so-called four dollar magazines, while its articles are just as good if not better.

The price is only \$1 a year, but by an arrangement we have made with the publishers, we can supply it to our subscribers for 60 cents. Send on your subscriptions to us.

Dr Hays

THE CINCINNATI MEDICAL NEWS.

VOL. II.

CINCINNATI, SEPTEMBER, 1873.

No. 9.

A CASE OF CHATON.

Reported by Dr. J. M. SWETNAM, of Kirksville, Mo.

On the morning of March the 4th, 1873, I was called in haste four miles into the country to see Mrs. T—. Upon entering her apartment I found her lying upon her back with her head and shoulders elevated, without the color of blood in her face, pulseless and unable to speak, while a pool of blood, which had “soaked” through both a feather and straw bed, extended almost half across the room. I removed at once the pillows from beneath her head, ordered the windows thrown open, and raised the foot of the bed about eight inches by placing a small box under each of the foot posts of the bedstead.

I then learned from the attendant, an old lady, that the woman had been delivered of a healthy child about five hours before; that the afterbirth had not yet come away; and that she had been bleeding ever since. The old lady had waited patiently, with constant assurances that “things would come all right,” until the friends, becoming alarmed, had sent for me. And it was now evident that without speedy relief the lying-in chamber would soon become the chamber of death.

Thoroughly lubricating my hand I at once, as gently as possible, introduced it into the vagina, and following with my index finger the direction of the funis, passed it easily through the os uteri, which I found to be perfectly patulous, reaching an orifice not sufficiently large to admit the index finger, through which the cord passed, and above which the placenta was retained—revealing a case of hour-glass contractions. Having no chloroform with me, I at once administered an opiate to overcome the contraction; and, after waiting a few minutes, I again introduced

my hand and made an attempt to dilate the contracted portion of the womb sufficiently to introduce the finger, but could not succeed until assisted by the relaxing powers of the opiate. After some effort, first one, then two, then three fingers passed into the cavity up to the point of attachment, which was upon the right side of the fundus of the uterus, extending as far down as the entrance to the right fallopian tube. I, as cautiously and nicely as I could, tore away the attachments until the placenta was separated, leaving a rough, uneven surface where I had torn it from the uterus; also some small fragments which I could not separate without extending my manipulations farther than I cared, or rather than it was prudent, considering the weakened state of my patient. I then withdrew the mass and kept up constant friction upon the abdominal walls until the uterus was well contracted. In half an hour the lady revived sufficiently to speak, and the pulse was 140 and feeble. I remained two hours longer and left her comfortable, with pulse 120, the hemorrhage having entirely ceased, leaving orders for the patient, under no circumstances, to be allowed to leave a horizontal position, and for the foot of the bed to be gradually lowered.

March 5th. Found my patient comfortable, with the exception of a slight pain in the head and some soreness in the hypogastrium. Her pulse was 120, and I noticed a bright red spot upon each cheek; action of the kidneys had been slight, and urine high colored. Prescribed—

R	Oleum terebinth,	qtts. v.	
	Spts. nitros dule,	qtts. x.	M

Sig.: Take at a single draught in a tablespoonful of water. To be repeated every four hours until free diuresis was produced.

The patient recovered rapidly without another untoward symptom, and was about her household duties in a fortnight.

In this case the cause which produced the trouble was, in my opinion, not different from that which in every instance produces hour-glass contraction. The child having been expelled, and the uterus making an effort to expel the placenta meets with resistance in its superior portion in the form of these attachments, which being firm act as a splint, preventing the contraction of that portion of the uterus while it extends to that portion below which firmly contracts, thus grasping the placenta and

retaining it as a natural result. I cannot conceive of a case of hour-glass contraction without this abnormal attachment, and such being the case it is bad practice to sit down and wait quietly for the spontaneous expulsion of the placenta, for it is not at all likely to occur; but the life of a patient may be lost by this delay. The indications in all such cases are to separate the attachments and remove the placenta at the earliest practical moment. To do this it is usually necessary in the first place to administer some remedy which will relax the contracted portion of the uterus. An opiate may be administered, but by far the best and most speedy relaxant is chloroform, a remedy which no physician who has much obstetrical practice should ever fail to carry with him.

CASE OF ECLAMPSIA.

Reported by Dr. ISAAC G. WOOLSEY, Locust Grove, Ga.

Miss —, an unmarried woman, about twenty-six years of age, robust and rather plethoric, weight one hundred and forty to one hundred and fifty pounds, was, in the month of June, 1872, taken in parturient labor at about 10 o'clock at night. I was called to attend the case, and arrived at the residence of the patient about 1 o'clock A. M. Found her suffering with puerperal convulsions, recurring with each contraction of the uterus, which was every five or ten minutes. I could obtain from her mother no evidence of premonitory symptoms. As it was a case of bastardy she tried to keep her situation concealed, and her parents observed no symptoms of labor till she was attacked with convulsions. I found her in a state of unconsciousness during the intervals, with considerable congestion; her pulse about 100 to the minute, hard, tense, and full; her breathing was hard and stertorous; during the paroxysm, which lasted from one to three minutes, the whole muscular system was in a state of rigid contraction; the tongue was swollen and bleeding from being bitten during paroxysm; bloody froth and mucus issuing from her mouth; eyes drawn downward and inward; pupils contracted; and the whole contour and general appearance was ghostly and frightful.

It was the first case I had ever witnessed, but such was the

marked peculiarity of the symptoms, presenting in this case such a scene of horror indescribable, that there was little trouble in forming a correct diagnosis, and leave an impression on the mind that is indelible. I immediately made an examination per vaginam, and found the os uteri dilating with a vertex presentation; left occipitis colyloid, or occiput in left acetabulum. There was, therefore, no complication in the presentation of the fetus, nor did my investigation lead me to conclude that there was any abnormal condition of the pelvic cavity. I proceeded immediately in the treatment which I thought the pathology of the case indicated. Venesection was resorted to at once, extracting from twenty to twenty-four ounces of blood, which had the effect of immediately controlling the convulsions to some extent. They were not so often and in a milder form. Also gave her veratrum viride, for the purpose of not only controlling the heart's action, but to obtain its anti-spasmodic effect on the system. Four drops Norwood's tincture were given every hour till two doses were taken, which reduced the frequency and force of the action of the heart.

In the meantime, by examination by auscultation and digital, I became satisfied that the fetus was dead, as no movements could be felt or heard, and that delivery would have to be accomplished by instrumental labor. At 4 o'clock, A. M., I dispatched a messenger for a consulting physician (Dr. L. M. Tye, McDonough, Ga.). He did not arrive till 10 o'clock. The os was fully dilated; the head had passed into the inferior strait; and on his making an examination he decided with me that the fetus was dead. There was now considerable inertia of the uterus, and we gave ergot to assist in the final delivery and also to prevent hemorrhage. We decided on performing craniotomy because being a primipara case there was some rigidity and want of dilatation of the soft parts, and there would be less danger of laceration.

We introduced the perforator, extracted the brain, and then delivered with the forceps. The fetus was large—would have weighed ten or eleven pounds. The placenta was delivered naturally and in due time.

After Treatment.—The patient was put on twenty grains bromide potassium every six or eight hours, with cold applications to the head continued as they had been previously used. Con-

tinued veratrum, four drops every six hours, till three doses were given; also gave the following cathartic:

R	Hydgr. chlor. mitis.	gr. v.
	Jalap,	gr. v.
	Gamboge,	gr. iii.

Sig.: Pulv. One to be given at once.

This, by next morning, produced pretty copious fecal discharges.

Second day, evening: The patient had but two slight paroxysms during the twenty-four hours; coma was being relieved; pulse about 85 to 90; consciousness returning; discontinued veratrum; continued the bromide potassium as before. Dietetic treatment, chicken soup every five or six hours.

Third day found her much improved; coma had mostly subsided; was pretty rational; pulse still diminished; continued bromide potassium, and ordered Dover's powders to be given at night, and a full dose of castor oil and oil of turpentine to be given next morning, which acted very well.

Fourth day, evening, saw the patient again. Found her entirely convalescent; there was now no coma; no congestion. The circulation was approaching toward a normal condition; the uterine secretions were going on naturally; there was still some slight, dull pain in the head, and cerebral excitement. I directed the bromide of potassium to be reduced to ten grains every eight hours as long as there were any cephalalgic symptoms remaining. Dismissed the case, and patient recovered rapidly.

CHOREA.

By Dr. C. E. HIRE, Thornville, O.

Seeing a case in "Notes of Treatment," by Dr. Elderdice, in the July number, on the above, I will report one, and corroborate his plan of treatment.

January 2nd, 1872, was called to see John T., aged twenty-one, who had been suffering with chorea for six weeks. Patient is not quite sound in mind, and the parents had to answer all inquiries. Put him on the following:

R	Potass. brom.	3 ss.	
	Aqua menth. pip.	3 vi.	M

Sig.: Tablespoonful four times a day.

Also:

R Ferri. Carb. Ecsic. q. s.

Sig.: Half-teaspoonful three times a day.

He slept well the first night, a thing he had not done for quite a while, even going so far as to keep his brother awake, who shared the same bed.

My patient improved rapidly, and in two weeks from beginning treatment not a sign of the disease existed. Continued the bromide potassium one week after in diminished doses, and then suspended it. At this time he is as well as usual.

HEREDITARY INFLUENCE IN THE IMPROVEMENT OF STOCK.

We find in the *Massachusetts Ploughman* the following synopsis of Dr. NATHAN ALLEN's paper read at the recent meeting of the State Board of Agriculture at Barre:

The doctor commenced his essay with some remarks upon the earlier attempts at improving stock, which were made in England about one hundred years ago, but which were chiefly experimental, and left no permanent guide. The experimenters failed either to record their experience, or to reduce their observations or their own methods to any systematic or scientific order, though, improvement was made in the art of breeding, and the boundaries of knowledge were gradually enlarged.

In New England no very great success has attended the efforts of stock breeders, though the last few years show a better state of things. This has arisen mainly from want of a distinct perception of the objects to be aimed at, of the means to be employed, and of the rules and principles by which they were to be governed. His object was to point out some of these rules and principles, and the basis on which they rest.

These rules and principles are based on physiology. But this science may be considered in its infancy, yet it furnishes us with a law, a great general law of propagation, pervading, in fact, both the animal and vegetable kingdoms. This fundamental law is based on the perfection of the whole organization, and the harmonious working of the functions of the various organs of the body. It may be defined to be the perfectionism of structure and harmony of function; or in other words, that

every organ in the body should be perfect in its structure, and that each should perform its legitimate function in harmony with each other. In fact, we find no such perfect standard amongst animals, but only approximations. The further we depart from this standard, the greater the variations; but these only serve to confirm the general law. Now we are to take into consideration the great law of inheritance that "like begets like;" and the application of two distinct agents produces countless variations both in classes and individuals.

Many of the laws of inheritance apply alike to man and the lower animals; but as there are striking differences between them both moral and intellectual and social, we see that the laws which govern the brute creation are more easily directed and controlled.

In changing or modifying hereditary influences, three grand agents are to be specially noticed, namely, climate, food and exercise. The last two are the most important. Good material is also necessary; the better that is, the more likely we are to succeed. First decide on what you want, and then seek the best stock. In selecting this we must pay regard to "pureness of blood," to "pedigree," and to "thoroughness of breeding." Avoid defects whether of structure or function or looks. These directions all harmonize with the great law of propagation, which the doctor proceeded more fully to unfold and illustrate, as well as the law of inheritance. In regard to the latter law he speaks more particularly of similarity in the parent stocks. If in them there exists an even balance of organs, the same will be likely to reappear in the progeny. But this is liable to be modified by secondary agents, and more particularly by disease.

The doctor then proceeded to speak of "breeding in-and-in," as it is called, a mode of improving stock, which, on his theory, can be very satisfactorily explained. This operation has sometimes proved eminently successful, sometimes the reverse. Here comes in the question of the effect of relationship; and his conclusion seems to be, that, inasmuch as injurious qualities are more likely to exist when relationship is close, such breeding should be avoided.

He then proceeded to speak of "cross-breeding," by which is commonly understood the bringing together the opposite qualities for improving the offspring in some particular respect. Here great care is requisite in the selection of the parents. Time

and patience are requisite in conducting the experiments. This is illustrated in the history of the horse. The principle of utility was considered in this connection in reference to our aims as well as efforts. Next he adverted to "quality of structure," or fineness of fibre, a matter of prime importance, whether it relates to one purpose or another, whether as affecting the fleetness of a horse, the tenderness of a steak, or endurance of toil.

In relation to both methods, it should be borne in mind that there are limits beyond which we cannot pass in aiming at perfection, and also that as we approach the extremes of fineness and coarseness of organization we shall find that animal life will decrease more and more.

He next spoke of inherited or transmitted disease. We should guard against the first appearance of it. We should take into consideration the physical condition of the parent stock just before and at the time of begetting offspring. Then followed some remarks with regard to the female and the male. But we have time only to attend to his remarks on Charles Darwin, whose special theories, however, he neither endorses nor approves. But he finds in his writings an immense store of facts, which carefully analyzed afford strong evidence of the truth of the principles advocated by himself. Dr. Allen maintained that Darwin's leading principle, viz.: natural selection, which he defined to be "the preservation of favorable qualities and the rejecting of injurious ones," was identical with the great law of propagation which he had been expounding, and that Darwin's "law of variation" might be fully explained by the "law of hereditary descent."

The doctor made some remarks on vegetable and human physiology as furnishing facts and arguments corroborative of his own theory, and closed with some remarks on the importance and value of this theory.

THE ADMINISTRATION OF CHLOROFORM.

By W. S. COLEMAN, M. D., Assistant Surgeon Toronto Eye and Ear Infirmary.

In a paper entitled "Resuscitation in Apparent Death from Chloroform," (contained in the June No., of the *Lancet*) it is remarked, "very many of the cases of accident from chloroform arise from the hap-hazard manner in which the anæsthetic is ad-

ministered." During the past year, I have administered chloroform at least to fifty patients according to a method originated by Dr. A. M. Roseburgh, Sen. Surgeon Toronto Eye Infirmary, and believing it to possess many advantages over and to be more safe than the usual methods, I propose to consider the effects of chloroform, and subjects connected with its administration, in order to estimate the affirmed advantages claimed for Dr. Roseburgh's method. Chloroform gradually administered, at first, like alcohol and most narcotics, stimulates; the pulse is quickened and more forcible; then the functions of the nervous centres are suspended, the brain loses the power of receiving sensations and exciting voluntary motion; and there is loss of perception, thought and consciousness. Soon the functions of the cerebro-spinal axis are abolished, the voluntary muscles are relaxed, and not capable of reflex action.

The Royal Med. and Chirurg. Society, by experiments upon animals, determined that "dilute chloroform vapour (5 per cent. or less) blown upon the fauces produced very little inconvenience, and the animal continued to breathe in a natural manner, but if concentrated vapour be suddenly administered, a spasm of the fauces is induced: afterwards, when the animal has inspired, the phenomena of asphyxia are for a time associated with those of chloroform poisoning.

It is believed that anæsthetics, as carbonic acid, ether and chloroform, act by suspending the due oxygenation of the blood.

In a case of fracture of the skull when chloroform produced its full effect of narcotism, the brain was seen to be remarkably pale, and whenever the anæsthetic influence began to subside, the surface of the brain became florid.

The pulse in complete anæsthesia is reduced to its normal frequency.

MODES OF DEATH.—According to Dr. Richardson, there are four modes of death. The first he calls *Syncopal apnœa*, in which death is very rapid, commencing within the minute after the commencement of inhalation. Respiration is suspended, there is an accumulation of carbonic acid in the blood, irritation of the vagus and arrest (from the irritation) of the action of the heart.

2nd. Death from epileptiform syncope, or muscular excitability. It occurs during the rigid stage. All through the body there is evidence afforded, on the arterial side of the circulation, of intense arterial contraction.

3rd. Paralysis of the heart and muscular system, from the slow and continued action of the narcotic. Death is preceded by an intermittent pulse.

4th. Depression from chloroform and surgical shock, paralyzing both the pneumogastric and sympathic.

CAUSE OF DEATH.—Dr. Richardson says, "I infer that in every case of death from chloroform, the cause of death is excitation,

either of the motor or of the controlling nervous mechanism of the heart." Dr. Sansom remarks, "the danger of chloroform resides in the fact that in strong doses it is a direct cardiac depressant, and paralysis of the heart is the usual form of death from chloroform in man." Lister maintains "that chloroform kills only in one way, viz: by paralysing the muscles of respiration."

PER CENT OF FATAL CASES.—Mrs. Syme gave chloroform in 5000 cases without a death resulting, and Sir J. Simpson quite as frequently, with a like fortunate result. Dr. Snow used his inhaler in 4000 cases, of which only one was fatal, and that seemed to be independent of the chloroform. Up to 1871, no case of death from chloroform had occurred during nine years, either in the Edinburgh or Glasgow Infirmary, two of the largest surgical hospitals in Great Britain, and it is very interesting to note the conditions of the so successful practice related by Prof. Lister. In both these institutions a folded towel on which the anæsthetic liquid is poured, unmeasured and unstinted, is still the only apparatus employed in the administration; preliminary examination of the heart is never thought of, and during the inhalation the pulse is entirely disregarded; but vigilant attention is kept upon the respiration, and in case of its obstruction, firm traction upon the tongue is promptly resorted to. In 17,000 administrations in the English hospital there was only one death. As an unfortunate contrast with the above, I saw, during the winter of 1871, three deaths during the administration of chloroform in "the London Hospital."

No death has occurred in a patient under 5 years of age, but the number of administrations under that age has undoubtedly been much less than above it.

DANGER OF CHLOROFORM.—In 109 cases of death, the committee of Med. and Chirurg. Society report on the stage of anæsthesia at which death occurred. Commencing to inhale, 10. Before full effect of chloroform, 50. During full effect, 52.

Figures go to show that the fatality in females and the debilitated, is less than in males, and the strong.

The average amount of chloroform used in 37 fatal cases was seventeen drachms. In five cases the amount was half a drachm.

Dr. Snow, from experiments upon animals, considered it dangerous for the human subject to breathe more than 5 per cent. of the vapor of chloroform. Messrs. Lallemand, Perrin and Duroy, find that though mammals can remain in an atmosphere of 4 per cent. for a considerable time, they die rapidly in an atmosphere of 8 per cent. It has been ascertained that from a handkerchief one may breathe an atmosphere containing 12 per cent., which, according to the above, would be very dangerous.

Dr. Anstie gives an account of 21 cases, in which he saw dangerous symptoms in the course of chloroform administration.

In 858 it was given on lint. In 2200 an inhaler was employed. In the former, one in 53 evinced signs of danger. In the latter where due dilution was provided for, the proportion was only one to 440.

The chloroform Committee report:—"Experiments upon the lower animals equally with observations on man, prove that there is but a narrow limit between that strength in which the vapour may be safely inhaled, and that which is likely to produce alarming symptoms if not death,"—and that it is as desirable to measure the strength of the vapor as to weigh the dose of a medicine administered by the mouth. "In animals the symptoms have been induced safely, with a fully diluted vapor." A proportion of 5 per cent. of vapor is fatal to animal life. Dr. Sansom, Dr. Anstie and the chloroform committee gave $3\frac{1}{2}$ per cent. as the proportion, and $4\frac{1}{2}$ as the maximum which can safely be respired.

That the system will bear a larger dose of chloroform if it be gradually given, seems evident from an experiment of M. Claude Bernard, since the effects of carbonic acid and chloroform are similar. A sparrow left in a bell glass, to breathe the same air over and over, will live for three hours, but if at the close of the second hour a fresh sparrow be introduced, it will expire immediately.

CONDITION OF PATIENT.—By some it is thought chloroform, by promoting shock during operations, is a source of safety in heart disease. In case of apparently well marked signs of fatty heart, perhaps it would be better not to administer chloroform except for the major operations, in which case the freedom from shock might more than counterbalance the depressing effects of the narcotic. Dr. Squarey cites the case of a woman between 60 and 70, to whom chloroform was administered, her foot was removed, she died a few days after from the effects of the operation, the heart was found very fatty, the walls thinned, left pleura half full of puss, yet she took the chloroform well for half an hour.

Dr. Richardson says he knows "of only one condition of the body especially dangerous for chloroform, this is a weakened and dilated right side of the heart." Many deaths have occurred in hard drinkers which may be due to the fatty heart of the intemperate. "In uræmia and pyæmia, and in severe shock to the nervous system, it should be withheld" "and in hysteria more than usual care should be used."

Sansom considers acute hyperæmia of the lung,—the only diseased condition of the lung in which chloroform should not be given.

SIGNS OF DANGER.—Sansom divides them into four classes:

1st. Signs of sudden cessation of the heart's action. These are most frequent. The pulse suddenly stops, or it first flickers

and then stops, or a sudden pallor of the face and lips is first observed. In these cases there is seen to be no embarrassment of respiration. It often continues after the pulse has ceased.

2nd. Signs of muscular excitement. Early in the inhalation the patient has struggled and risen up, and has fallen back dead, or the muscular contortions occurred when there was complete insensibility. Lividity of the face is caused by the suspension of the action of the respiratory muscles.

3rd. Signs of embarrassed respiration. The respiration may be laborious, irregular or stertorous.

4th. Signs of simultaneous arrest of respiration and heart's action. An inspiration of a highly charged atmosphere has been taken and hence the sudden arrest of pulse and breathing. In the experience of Dr. Squarey the pulse does not give much sign of danger till after those given by the respiratory system; yet, he remarks, chloroform certainly does kill by paralysing the heart, and the pulse should be watched.

Dilatation of the pupil, which is said to be a sign of danger, is also the first sign of the patient's recovery from the influence of chloroform. Prof. Lister divides stertorous breathing into two kinds, palatine and laryngeal. Although the snoring produced by vibrations of the velum frequently takes place without indicating danger, whenever there is any stertor, other signs of danger should be looked for.

METHODS OF ADMINISTERING.—Many of the inhalers used are faulty in furnishing the same per centage of vapor at the commencement of as during the subsequent administration. Clover's inhaler is free from the above objection, yielding any per cent of vapor required, but the size and expense of inhalers, and the generally considered safety of the ready method of giving chloroform, make it unlikely that inhalers will be used by any number of general practitioners. Dr. Snow assumed when chloroform is given from a folded cloth it is apt to be given in too concentrated a form, to which he attributed most of the deaths, whereas Prof. Lister thinks the argument a fallacy, and shows by his own experiments if 3iss. of Chloroform by measure is poured on a cloth similar to that used in practice, at a temperature of 70 deg., twenty-four grains are evaporated during the first half minute, giving 4.5 per cent, as the proportion of vapor to the inspired air. Now, supposing in practice, 3iss. is used during the early part of the half minute, more than 4.5 per cent. is evaporated, and if the quantity be soon repeated, it is possible that death may occur before the end of the half minute, since out of 109 deaths the chloroform committee report ten death at the commencement of inhalation. Yet in practice, Prof. Lister says: "the precise quantity used is a matter of no consequence whatever, in which case the per cent of vapor must be above that considered safe." We have seen that Drs. Snow

and Sansom, the chloroform committee, etc., hold quite a different opinion. I have never seen chloroform given by drop in hospital practice, except in New York, and then the quantity was not measured by counting the drops per minute. In 1847, Sir J. Y. Simpson writes: "The simple handkerchief is infinitely preferable to any instrument. I have lately seldom measured the quantity." We must judge of its effects more than its quantity. In 1860, he writes, "For some time past I have administered chloroform by a new method. One single layer of towel is laid over the patient's nose and mouth, and the chloroform is poured drop by drop. By the new method the patient is more rapidly anæsthetised, whilst a great saving is effected in the amount of drug employed. There is little or none of the drug lost, and it is inhaled mixed with a sufficient quantity of air, which is easily inspired through a single layer of ordinary napkin." It is noticeable that in 1860, Prof. Simpson thinks there should be a "sufficient quantity of air," and how can that be possibly secured without measuring the chloroform. Dr. Sansom lays down two principles in administration for securing the greatest safety:

1st. The continuous inhalation of an atmosphere of known strength (of about $3\frac{1}{2}$ per cent). This is the principle of definite dilution.

2nd. The administration of an extremely dilute atmosphere at first, and the progressive increase in its strength, never overpassing five per cent.

I believe Dr. Roseburgh has secured, by his new method of administering chloroform, the maximum of safety, in accordance with the principles laid down by Dr. Sansom, by such a ready method, and possessing so many advantages, that it seems to me to require only a trial, and I predict there would be a rare exception to its adoption even by the most conservative. Dr. Roseburgh writes: "My method of administering chloroform is as follows:—The patient is placed on his back; and one thickness of a linen napkin is placed over the face. A 3ii. vial is filled with chloroform; an assistant observes the pulse, and holds the watch in such a position that the administrator may see the second hand. The napkin is raised about $1\frac{1}{2}$ inches from the mouth, so that it does not touch the nose. The chloroform is now dropped upon the napkin over the mouth. One-third the maximum dose is given during the first minute; two-thirds the second, and the maximum quantity the third. The maximum dose should be continued from two to six minutes, till full narcotism is produced. The maximum quantity may be given occasionally, or one-half the quantity continuously. To adults I have found 30 drops per minute, in most cases, sufficient. For children 12 years of age 18 drops; 7 to 9 years 15 drops; 5 years 8 to 10 drops. To adults never more than 35 drops per minute.

Dr. Roseburgh estimates if a patient inspires the whole of the vapor of 33 drops of chloroform per minute, he will be inspiring $4\frac{1}{2}$ per cent. If 20 per cent be wasted, the per cent inhaled would be reduced to $3\frac{1}{2}$, the safe proportion. The advantages of the method, judging from the number of cases I have seen, are, the small quantity of chloroform used, 3i. to 3ij. Even children seldom object to it when given as directed. Adults seldom cough or spit. There is rarely any violent muscular movement or struggling, and the weight of authority seems to show that it is more safe to measure the dose than to give it hap-hazard.

RULES FOR ADMINISTRATION—If the patient has fatty heart, dilated right ventricle, hyperæmia of the lungs, or is intemperate, chloroform should be given perhaps for major operations only, and then with great care.

A glass of milk four hours before the administration would perhaps be the most suitable food. Half an ounce to an ounce, of brandy or whiskey to a full adult, and a teaspoonfull to a child should be given twenty minutes before the administration of chloroform. The patient should lie down, as the heart is depressed. If the administrator has not an assistant to take the wrist pulse, he may keep a finger on the temporal artery. The respiration should be closely watched, and the face occasionally. When there is no reflex muscular action, which is best tested by the patient not winking when the eyeball is touched, the patient is prepared for the operation. Squarey says, "the insensibility of the pupil to light is a more reliable test. If there be signs of danger draw the tongue out forcibly with the artery forceps." Hoping the putting of the above facts and theories together may somewhat help to render the administration of chloroform more safe, this too lengthy article is brought to a close.

INHALATION OF LIME-VAPOR IN CROUP.

Dr. W. W. Parker, in the *Virginia Clinical Record* for April, details his treatment of a case of croup by the inhalation of vapor saturated with lime. The patient was a boy $2\frac{1}{2}$ years old, who had been attacked on Monday night, and was visited by him Thursday evening, after he had been left to die by a physician who had treated him for twenty-four hours or longer with emetics, etc. The condition of the child appeared to be hopeless. As a last resort, Dr. P. adopted the process which we will let him describe in his own way:

"The child was in a hot, close room, with a dozen neighbors, who had come in to see it die. I had it taken to a larger room and proceeded to make ready a large tub, and had collected a dozen large rocks, some larger than a man's head. These had to be heated, and the lime, a peck or more, to be collected from

the neighborhood. It required about an hour to get up steam, and in the meantime the child was tossing itself upon the bed; now begging to be taken up in its mother's arms, then to be put down again in a voice sometimes almost inaudible. I was afraid it would die before the preparations could be completed. The room was made as close as possible, the curtains let down and the only door of entrance left closed as well as possible, and a large blanket hung before it so as to prevent the escape of the vapor. There was no fire in the room. As soon as the rocks were well heated they were put into the tub, and the mother with the child seated near to it. I commenced to stir the lime in the tub and the vapor arose in considerable quantity, but not enough to fill the room and impregnate the air strongly with the smell of lime. It was suggested to put a sheet over the mother and child, and as no time was to be lost, I caught at the idea, and upon stretching the sheet over the mother and the child, and then over myself, I so collected the vapor that often I could not see the child, though he was not three feet from me. I continued to stir the lime mixture steadily for two hours, adding every twenty or thirty minutes large hot rocks. In twenty minutes after placing the child under the sheet it began to become quiet and this gradually increased until I left, which excited some faint hope of success. When first put under the sheet the child made a struggle to get out, but in a few minutes ceased its efforts. The respirations at this time were about seventy-five in the minute, and continued at this point during the next twenty-four hours.

"I remained under the sheet about two hours and felt not the least inconvenience, except that the next day I had some rheumatism in the back of the neck. The vapor of lime was not at all disagreeable to me and excited neither in the mother nor myself any tendency to cough. The child would allow no one but the mother to hold it. On leaving the house at ten, I directed the steaming to be kept up regularly, and requested the father, if the child was living at 6½ o'clock next morning, to come for me.

"I awoke at six and awaited anxiously for the summons, but the town bell struck seven and I gave up all hope, when suddenly my office bell rang, and I was told by the father that his child was still alive, but no better. In a half hour I was at the bedside and found that at day it was concluded not to continue the vapor bath any longer, simply because I directed it to be kept up "all night." The child was still breathing wretchedly, but was more quiet and had been able to drink a little coffee. When I saw it on the night before (the 28th) it would swallow nothing unless forced. The water in the tub had not yet cooled, and hot rocks were again put in and the mother and child put under the sheet. I remained about an hour, mostly under the sheet, and kept up a full supply of vapor. The pulse was now regular,

though very quick, and the skin soft. The respiration not changed. The voice was no better, but the patient, though greatly exhausted, was calm.

"I must not forget to state that from the time I determined to try the lime vapor I also concluded to use large doses of calomel. I commenced with six grains every hour, thinking it very doubtful if I could get down the half of it. It required three persons to give it anything. These calomel powders, at first six, then three grains, were continued every hour till the following afternoon; that is, twenty-four hours; when the interval was increased to two, and then three hours. A small mercurial operation came away during the night.

"I left the child at nine A. M. and called again at 12½, and found that little or no change had occurred in the symptoms, except that it took milk and coffee mixed, and swallowed with but little difficulty. I called again at night, and ordered the continuation of vapor bath.

"On making my visit early Saturday (the third day), I found the child was better in almost every respect. The voice was better, skin and pulse better. Countenance free from anxiety. The calomel was given in very small doses and at longer intervals, and in the evening discontinued, as it was acting freely. I had now great hopes of recovery.

"I called again at about 4 P. M., and found the patient in a terrific convulsion. He had been in this condition a half hour before I got to the house. The convulsion was general. The bowl of a spoon had been flattened by the teeth in an effort to protect the tongue, which had been severely lacerated and was bleeding freely. I applied ice for an hour to the head and had a blister applied to the nape of the neck, after first rubbing croton oil freely on the scalp and putting the feet in a hot bath. I remained with the patient about two hours, but no sign of consciousness returned. I ordered two grains of chloral to be given and repeated every two hours if the patient showed any sign of convulsions, such as stretching of the muscles or great restlessness. The mother informed me that the child becoming restless she gave the chloral, and upon this he became quiet and fell into a sound sleep.

"On making my visit the next morning the first thing I looked for when I came in sight of the house was to see if crape was not on the door, and seeing none a slight hope was felt that if not yet dead the child might possibly live.

"On going to the bed-side, to my inexpressible relief, I found little patches of eruption on the temples which satisfied me that measles were present. The patient was conscious, and while extremely weak and hoarse, was willing to take drinks freely and inclined to sleep quietly. The eruption gradually extended over the body, but was not very well developed anywhere."

From this time the patient gradually recovered without salivation or any unpleasant sequelæ. It strikes us that disease, patient and doctor all exhibited remarkable energy, and the only wonder is that they did not all three give out sooner. In the cases previously reported, in which lime has been used, the success has been imputed to the specific effect of that agent in dissolving the false membrane. But in the present instance the lime was secondary to the prolonged steaming. And then the calomel and the measles come in to cloud the diagnosis, the prognosis and the therapeutics. The use of calomel even in much larger doses, is old, and we have known it to cure desperate cases of croup after the failure of other means, without salivation or even purging. But we leave the case to the reader. There is something to be learned from it.—*Pacific Medical and Surgical Journal*.

SCIENTIFIC HOMŒOPATHY.

One of the most remarkable facts connected with a philosophical exposition of the principles of the treatment of diseases and the action of medicines, is to be found in the success with which the homœopathic system has been maintained in the presence of the prejudices, and the *a priori* reasoning of the thinking, inquiring classes, who want to understand the why and the wherefore before they are willing to believe. Of such people as swallow the most monstrous absurdities without ever asking questions, we say nothing. Homœopathy has grown to very respectable proportions and position, albeit having, apparently, nothing in the whole realm of natural science to afford it even the most feeble countenance or support. We have no intention to discuss the reason for the existence of a phenomenon so singular. Our purpose now is, merely to present the following statement of its leading principles, and some of the logical deductions resulting from them, which were published some time last year in the *Albany Cultivator and Country Gentleman*, under the head of "The Veterinarian," and were furnished by a correspondent writing from Paris on the diseases of horses. Some parts of the article are a little prolix, but the language is courteous, and the conclusions, we think, are in no respect unjust or illegitimate, and will be read with interest and possibly with profit.

The foundation principles, the writer says, are three in number, viz.:

1. Medical substances have the property of producing disease in healthy organisms, and they can prove curative only in proportion as their effects resemble the symptoms by which a given malady is made manifest.

2. All disease consists in a "dynamic aberration of our spiritual life," of an "immaterial change in our inner being," together with certain symptoms by which this "dynamic aberration" is made manifest.

3. Medical substances act upon the immaterial principle of diseases by a certain force, a dynamic principle, which they contain; and this force may be separated from the material part of the medicament, and rendered the more active in proportion to the amount of dilution, of succession, and of trituration which it undergoes.

These are the principles as laid down by Hahnemann in the early part of this century, and they are those upon which the homœopathy of to-day is founded; let us examine them carefully, and see if they can be applied with advantage in the practice of veterinary science, and let us not forget that it is in the interest of this science alone that we are making the examination.

(1.) Although it is true that nearly all substances, when given in excess, will produce disease in healthy organisms, it is not equally true that all medicinal substances must produce a morbid action in order to be curative, as is claimed by homœopaths in their theory of cure, as laid down by Hahnemann, which is that "an artificial disease must be substituted for the natural one, the former disappearing of itself." What is the morbid action of a mucilaginous drink given to a horse with abdominal pains caused by the dry and impacted state of the intestinal contents? And what that of an ammoniacal solution which condenses the gas, and arrests fermentation in the digestive cavities? There are other agents which prove curative by determining physiological actions in certain organs, instead of producing diseases—as is the case with certain diuretics given to excite a natural action of the kidneys, and thus cause poisonous accumulations to be removed from the blood. The curative property of a medicine does not necessarily, then, depend on its properties of producing disease, but may be quite distinct.

And now is it true that no medicine can cure disease unless the symptoms which it produces, in a healthy organism, are similar to those of the malady to be combated? Here an immense number of contradictions flash into the minds of all thinkers on this subject, the results of experiments confirmed every day. The first medical men of the world are united in saying that *quinine* will not produce intermittent fever, however large are the doses in which it may be given, and, as this supposition was the base of the whole theory of homœopathy, the fact is of considerable importance. The medicines called anti-spasmodic do not produce spasms, even in exaggerated doses; and *digitalis*, which is given to decrease the action of the heart, does not increase it when given to healthy animals. Could more prompt or certain medicines be wished for to combat diarrhea

than opium or the preparations containing tannic acid? and is there any dose of these medicines sufficient to produce such disease? Quite the reverse.

And further, will medicines in all cases cure diseases similar to those which they produce? In other words, can all diseases be cured by medicines which produce similar symptoms to these which we wish to remove? If we have a disease caused by animal or vegetable parasites, it is necessary to apply a medicament that will destroy the parasite; or if caused by metallic poison, we must give an antidote, and, in these cases, it seems impossible to apply the aphorism of *similia similibus*. When, in the case of difficult parturition, the contractions of the womb are too feeble to expel the fetus, what medicine do we give—aconite, or digitalis, or opium? No, but those which have the opposite effect, as the ergot of rye. In case of a severe burn from boiling water, causing an extensive blister, would we not call any one a madman who applied on this a blistering agent, such as cantharides, which produces a similar disease? Common sense tells us that the opposite treatment is the one that should be adopted. Let us suppose a veterinarian practising on homœopathic principles to be called to see an animal poisoned by aconite; no one knows what is the matter; the animal is very sick; the practitioner makes his examination, and then he searches for some medicine which in large doses produces the same symptoms. Of course, if a competent man, he will hit upon aconite as the very remedy, and administer it. How many doses will be necessary for a cure?

(2.) The conclusion of Hahnemann, that all disease is a change in the mode of action of the spiritual life, the inner being, or in other words, the soul, is little more than a modification of the *animism* of Stahl, who considered it as an effort of the soul to expel the cause of the trouble. At the time when these theories were formed, people delighted to explain such parts of the workings of the body as they could not understand, by supposing them to be caused by spirits which resided in the organism. Of this we have ample proof in the various systems of physiology which made their appearance in the latter part of the eighteenth century. These theories, however, were all formed to explain actions in the human body; what of the disease of animals—have they also an inner being, a spiritual life, a soul? If so, what causes the diseases of plants? Do we find here, too, but an *immaterial change of the spiritual life*? There are many diseases which we see plainly are caused by an external agent acting upon certain organs, modifying their action, changing their form, and thus indirectly interfering with other organs, and bringing disease to the whole body, and here this theory is clearly inapplicable. If a knife enters the vital parts of the body, letting out the life blood, and causing anatomical alterations which threaten

the extinction of certain functions; if a quantity of caustic poison is taken into the stomach, decomposing the tissues with which it comes in contact, and suspending the duties of the organ; if a parasite develops in the brain, and, by its pressure on surrounding parts, causes paralysis in any portion of the body; if an animal substance, however undetermined its nature, finds its way into the blood, and, by bringing changes in this fluid, alters every tissue and every function in the body, and causes the gravest maladies, are we to consider all these as being really but immaterial changes or dynamic aberrations?

But we must not forget that there is another element in homœopathic theory of disease—it is the symptoms, and, for the practitioner, this is the one important element. The disease itself, being but an immaterial change of the inner being, is invisible and unknown, except by the symptoms, and it is to these that the whole attention should be turned. This is a necessary conclusion from the principle which has just been considered, and as such needs no separate discussion.

(3.) Reasoning from this hypothesis, that the essence of disease is immaterial, Hahnemann came to the conclusion that it could not be attacked by a material substance; for of what use is that which is material against that which is not? Experience, however, had shown that certain medicines possessed curative powers; these then have an action on the immaterial principle of the disease—but how? Nothing is more clear—they themselves contain an immaterial principle—a force which acts upon the inner being, and changes the *dynamic aberration* into a healthy action. But the strangest conclusion of all is that a medicine becomes the more active in proportion as it is diluted and divided. This also, however, is made perfectly lucid—"the activity of the substance depending on its immaterial principle, this latter preserves all the power of the former when separated from it, and in this state is in the best possible condition to attack the immaterial principle of the disease, and to annul it." It is to effect this separation that the medical substances are made to undergo innumerable shakings and dilutions, and triturations. By this mode of preparation, the powers of the substance are so enhanced that an infinitely small dose has astonishing results.

A few grains, of the thirtieth dilution, is the dose usually recommended for our domestic animals; and so powerful is its action, says a somewhat celebrated veterinary homœopathist, that it is to be desired that none of it be swallowed, the imbibition of the mucous membrane of the mouth proving abundantly sufficient. Let us try to get an idea of what the strength of this dilution is, reasoning from the amount of this inert substance with which a certain quantity of medicine is diluted.

To make the first dilution, we are directed to mix one grain

of the medicinal substance with one hundred grains of sugar of milk; for the second dilution, one grain of the first to be taken and mixed with another one hundred grains of sugar of milk; for the third dilution, one grain of the second is to be taken, and the same operation performed, and so on until the thirtieth is reached; all this, of course, with an appropriate amount of trituration.

Some years ago a calculation appeared in a French medical journal which so clearly gives the results of this mixing, that I will reproduce it. It considers that each dilution is mixed with one hundred times its weight of sugar of milk, instead of a single grain being taken, as is found necessary in practice; of course, by each proceeding, the resulting dilution is of the same strength. "The first dilution, then, will require one hundred grains of sugar of milk; the second, ten thousand grains, or about eighteen ounces; the third, one hundred and twelve pounds; the fourth, eleven thousand two hundred pounds; the fifth, one million one hundred and twenty thousand pounds; the sixth, one hundred and twelve millions of pounds; the seventh, eleven thousand two hundred million pounds.

"Continue the successive multiplications, and you will see that the 20th dilution a grain of the medicine will be divided in the weight of the world of sugar of milk. The twenty-third corresponds to a grain triturated with the weight of one million terrestrial globes; the twenty-sixth would multiply this last quantity by one million, and, great heavens, to what will you arrive at the thirtieth, which is sometimes prescribed?"

Another calculation, made by Dr. Pavini, of Naples, which I have not the space to give in detail, shows that "the thirtieth dilution of a single drop of medicinal substance would require as much alcohol as could be contained in our world, all our planetary system, and perhaps all the stars of the first and second magnitude that one can discover in a beautiful night of summer; while for the fortieth, it would be necessary to add to this all the constellations that one can discover from one pole to the other."

These figures, owing to the immensity of the subject, are of course approximations; but they are sufficiently exact to show the terrible extent to which we may be led when following nothing but our imaginations.

To explain this apparent absurdity, Hahnemann has said, "your philosophers will tell you that immense powers like heat, light and electricity, are without weight." But as Mr. Bouley very aptly remarks, "the sun gives more heat and light than a candle! the power of an electric pile increases with the number of its couples! and, gross as may be the idea, I cannot prevent the admission that he who swallows a kilo (two pounds) of arsenic has mere chance to feel the effects, depending on its

immaterial principle, than he who takes only a millionth or *even* a decillionth of a grain." In other words, while Hahnemann tries to convince us that this medicinal force increases in proportion as the material substance from which it emanates decreases, all the forces of nature to which he has called our attention are governed by *exactly opposite* laws.

We are asked "if the different forms of venom and virus do not give proof that a great force may reside in an infinitely small particle of matter?" Very true; but this force is not due to their extreme division, since nothing is more surely demonstrated than that the activity of these substances increases with the quantity, and the degree of concentration, and decreases by dilution, until it finally entirely disappears. If this were not so, the water of rivers which flow through our great cities would be loaded with these immaterial principles of disease, which would increase with dilution, and reach their greatest activity in the ocean; a single exhalation of poisonous vapor, from the lungs of a diseased animal, would gather power as it become mixed with the atmosphere, and would be sufficient to depopulate the globe; a poisonous plant dropped into one of the pure and limpid streams which empties into Lake Superior would infuse its immaterial principle, which, gathering power from the repeated dilutions and divisions, would make it unsafe for man or beast to cool their thirst with water from the St. Lawrence. Let us, then, thank the Creator that this leading principle of homœopathy exists only in the imagination of its followers.

After offering what precedes, as a brief statement of my reasons, I can now say that in my examination I have found the doctrines of this system of medicine to be far from what might be expected of them. Principles which are laid down as general, indeed those which form the foundation of the doctrine, have so many exceptions and contradictions, which may be found daily in practice or drawn from the various departments of science, that we should be obliged to place it among the extremely improbable theories, even before additional experimentation. And when I have added that careful experiments, at several veterinary schools, have shown homœopathic medicines to have no effect on diseased animals, I consider there are sufficient reasons why this doctrine should not be made the base of veterinary practice.—*Druggists' Cir. and Chem. Gazette.*

THIRD ATTACK OF MEASLES.—I have a young lady, about twenty-three years of age, suffering for the *third* time from an attack of measles! All the characteristic symptoms, such as the eruption, the deeply congested state of the mucous membranes of the eyes, nose, larynx, and bronchia, are most pronounced.—CHAS. ANDERTON, in *London Lancet*, July 26, 1873.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, July 2, 1873.

Dr. E. J. TILT, President, in the Chair.

The following gentlemen were elected Fellows of the Society: James Henry Bennet, M. D.; Francis Davison, L.R.C.P. (Armagh); Simon Fitch, M. D. (Portland, Maine.); Robert Henry Moon, F.R.C.S. (Norwood); and Richard Wilkins (Madras).

Dr. Heywood Smith exhibited a fetus with a diaphragmatic hernia. It was a male and a fifth child. The first only lived an hour, the three next were born dead, and this only lived three-quarters of an hour. On opening it, the liver was found fairly normal; a prolongation posteriorly passing upward was embedded in the diaphragm. The stomach was lying nearly perpendicularly. There was only a short portion of small intestine, and about the lower half of the large. On opening the thorax, all the rest of the intestines were seen occupying its left side. The heart was placed centrally, taking up the space of the right lung, while the left lung was rendered even smaller by the large space taken up by the intestines, which were found to have passed upwards through an opening in the left posterior aspect of the diaphragm just large enough to admit the tip of the little finger. To the right of this was seen the spleen, dipping into and filling a sort of pocket at the posterior margin of the diaphragm.

Dr. Squire exhibited an earthenware bedpan, modeled by Phillips, of Oxford-street, on the design of a nurse, to allow free ablution, also a linen breast-supporter, invented by the same nurse, and found to be very useful.

Dr. Heywood Smith did not know whether Dr. Squire was aware that there was a bed-bath made by Maddox, of University-street, which was exceedingly convenient, and much lighter than the pan now exhibited.

Dr. Protheroe Smith exhibited his Pneumatic Indiarubber Plug for facilitating the introduction of cylindrical specula. It forms a soft elastic cushion in the end of the speculum, and renders the introduction of it painless to the patient.

Dr. Aveling showed a drawing demonstrating what he considers to be the best mode of opening the vein so as to enable the operator to pass a tube into it with ease in transfusion. He stated that he had transfused blood a second time by the immediate method, and that this plan of opening the vein was the result of his further experience. He seizes the exposed vein with a pair of fine forceps, and incises it so as to form a V-shaped flap. Although the opening thus made may become obscured by blood, it is still readily to be found by using the forceps as a director, and passing the tube down it into the vein.

Dr. Savage (Birmingham) remarked that in a case of transfusion which had occurred in his practice, he had used Dr. Ave-

ling's syringe. He found no difficulty in opening the vein, nor in inserting the nozzle. He exposed the vein by transfixing the skin, and then passed a probe under it. It seemed to him that nothing could be simpler or more successful than using Dr. Aveling's syringe.

Dr. Aveling thought it unnecessary to pass a probe under the vein, and that the less the vein was disturbed the better.

The President congratulated the Society on the re-admission of Dr. Henry Bennet, the importance of whose scientific work could be best estimated by the very different character of the books on the diseases of women, published before and after 1845, when Dr. Bennet published his little work "On Inflammation, Ulceration, and Induration of the Cervix." In that work he taught the profession of this country the two great lessons he had learnt in the Paris hospitals:—(1) That diseases of the womb must be studied, like other diseases, by every available mode of investigation; and (2) that the treatment of disease of the womb should be, to a great extent, surgical. These views have been adopted by all the eminent men who have written in English on diseases of women since 1845, and a school of gynæcology had sprung up which he called English, comprising American, Scotch, and Irish authors, and which he believed to be richer and more varied than that of any other country. Dr. Henry Bennet was the founder of this school, and it was a matter of congratulation for the Obstetrical Society that his unexpected recovery again enabled him to take an active part in its labors.

Mr. George Roper brought forward

A CASE OF HYPERTROPHIC ELONGATION OF THE CERVIX UTERI AT THE FULL TERM OF PREGNANCY.

E. C——, aged 22, a primipara, was taken in labor on the morning of November 3rd. The next day the membranes ruptured naturally, and the pains became strong and frequent. The cervix uteri protruded from the vulva to the extent of about three inches; it was in circumference about the size of an ordinary adult male wrist, the portions without and within the vagina measuring about four inches in length. The canal of the cervix would just admit the forefinger, but no presentation could be felt; the canal was too long to allow the finger to pass up to the uterine end. The structure of the cervix was in a firm, hard, gristly condition; and there seemed to be no probability of its expansion under the natural efforts of the uterus. Dr. Barnes saw her when she had been in labor thirty-six hours, and slight expansion had taken place; the pains were not violent, and there were no symptoms of expansion. Further delay was advised; but should further expansion not take place free incision of the lower part of the cervix was recommended. After waiting four hours, seven incisions in the os externum were made, the tissue cutting with a gristly sensation. After the operation a gradual

dilatation took place, occupying sixteen hours, at the end of which time the patient was delivered by forceps. The duration of the labor was fifty-two hours. The child was alive, and the mother made a good recovery. The author believed such a case as this was not amenable to treatment by means of water- or air-bags. Two months after delivery the uterus was found fairly involuted, and the cervix slightly larger or longer than usual. The portion which had been elongated hung down into the vagina like a shriveled skin; this was removed. The woman has since had several children after easy labors.

Dr. Brunton thought that in this case great benefit might have arisen from putting the patient in the knee-elbow position. He had met with a similar case, and had found this method of treatment successful, the prolapsed uterus passing into its natural position, and labor terminating in a short time.

The President wished to know what was the effect of pregnancy in preternatural elongation of the cervix—whether the result of the puerperal tissue-transmutations was to shorten it in a manner analogous to that softening of a hard cervix which we had repeatedly seen to follow pregnancy.

Dr. Barnes said that these cases were sometimes cured by labor and sometimes not. Dilatation would occasionally answer as a mode of treatment, but incisions were now and then necessary. He had seen a case in which protruded cervix formed such a large mass as to be mistaken by the midwife for the whole uterus, and he believed that this mistake had often been made.

Dr. Playfair said that, with regard to incisions, it was right to remember that in such cases as that now related, and in cases of rigid cervix, they were very different things. In the latter the cervix was stretched and thin, and the incisions would be merely linear; in the former each cut would be the entire length of the hypertrophied cervix—in this case nearly four inches—and the risk of septic absorption would be, of course, materially increased. He did not make these remarks to criticise the practice adopted, as he believed it was the only means of overcoming a very formidable difficulty.

Dr. Madge said it was generally supposed that lacerations of the cervix uteri during labor, without any ill consequences following, was a common occurrence; that being the case, there was not so much fear in making incisions in the cervix when rigid and unyielding.

Dr. Protheroe Smith could confirm the remarks of Dr. Barnes, having for many years been in the habit of incising the cervix when it formed an obstacle to the progress of labor, and in no case had he found the wound to extend beyond his incision. He had seen a case in which an unyielding cervix had been completely torn from the body of the uterus. He advocated the plan of cutting only laterally to avoid wounding the peritoneum,

and of using the douche freely afterwards to prevent absorption of putrid lochia.

Mr. R. Eardley-Wilmot read a paper on

THE FILLET, OR LOOP, AS AN OBSTETRIC AID; WITH ESPECIAL REFERENCE TO A NEW MODIFICATION OF THE INSTRUMENT.

The author pointed out that the fillet was an instrument of great antiquity, but that it had fallen into disuse; that it was treated in our text-books with silent contempt or unqualified condemnation. In spite of this he believed the fillet to be a useful instrument. It may be used more in cases where slight or great force is required, and, as a general rule, in any case where the head is clear of the os uteri. It is lighter, more portable, and can be used more easily than the forceps, and it does not frighten the patient. If desirable, it can even be used without the patient's knowledge. He had employed it in twenty-five cases; all the children had been born alive, and in only one was there slight rupture of the perineum. The fillet, in its old form, he believed to be difficult of introduction and adjustment, and liable to injure the child. Dr. Westmacott had improved it by rendering the instrument capable of being easily removed, one end of the loop being made so that it can be detached from the handle; but the difficulty of adjusting still remained. This the author overcomes by having the handle of the fillet divided longitudinally, so as to leave one end of the whalebone loop attached to each section of the haft. The two portions are separable at pleasure, or united, when compressed, by steel pins projecting from one half of the handle and perforating the other. The instrument may be introduced as usual. Let one-half of the handle then be taken in each hand, and by a gentle sawing movement in the direction required, and by pressure on each limb alternately, the loop is readily brought into its due position.

Dr. Westmacott said that four years ago he had shown the Society his fillet, with the improvement of being able to remove the whalebone loop from the handle. The idea struck him then of dividing the handle, but, wishing to keep the instrument as simple as possible, he had abandoned it. He had since added a strong indiarubber ring, which slides up and down the loop, to make it more portable and to compress the head of the child. He objected to the author's plan of applying the loop over the chin, as it might slip towards the neck and strangle the child. He usually applied it over the eyebrows or nose, and he had not seen any other bad result than a slight mark, which disappeared in a few days. He thought the loop of the instrument now exhibited too thin. Its sharp edges might scratch the skin, or twist, or split. He had used his own fillet sixty or seventy times, and with favorable results in almost every case.

Dr. Aveling thought obstetrical writers very properly omitted

any lengthened description of the fillet. Compared with the forceps it was an unscientific instrument. Its liability to slip had been observed long ago, and Livret, to prevent this accident, added a third branch. This same modification had been, a short time since, reinvented by Dr. Sheraton, and, he was sorry to say, also patented. If the fillet were hooked over the chin, as recommended by Mr. Eardley-Wilmot, there was a chance of its slipping round the neck and producing strangulation; and if over the nose or brow, as advised by Dr. Westmacott, it might injure the former or slip off the latter. The instrument might answer where slight traction was required, but he would be sorry to have to rely upon it where largeness of the fetal head and rigidity of the maternal passages demanded the exercise of much force.

Dr. Playfair believed that the reason why the fillet did not sink into well-merited oblivion was the appearance of simplicity about it, and the fact that it could be used without the knowledge of the patient, this latter being, in his opinion, one strong reason why it should not be used. But the truth was, as Dr. Aveling had remarked, that the fillet was essentially an unscientific instrument. If it were applied when the head was high in the pelvis, traction over the face would necessarily produce extension of the chin before the time of that change had arrived. Another strong objection to the fillet was that it drew attention from the forceps—an instrument perfect in its adaptation to the natural mechanism of labor.

Mr. Eardley-Wilmot found his own fillet much more easy to use than Dr. Westmacott's. He did not think there was fear of strangling the child or of the loop slipping, nor did he think the fillet an unscientific instrument, or likely to interfere with the natural course of labor. He never intended to place it in competition with the forceps as a means of delivery in difficult labor.

Dr. E. H. M. Sell read a paper

ON A CASE OF COMPLETE UTERUS BICORNIS, THE SEPTUM EXTENDING INTO THE ONE COMMON CERVIX.

This case occurred at the General Hospital of Vienna, and the diagnosis of it was made out by Professor C. Braun while the patient was under chloroform. Owing to the narrowness of the pelvis, delivery was very difficult, and the child had to be extracted by turning. The conjugate diameter of the pelvis measured only two inches and a half. The placenta had also to be removed by the hand, as the uterus was powerless. On the sixteenth day after delivery the patient left the hospital well.

CASE OF EXTRA-UTERINE PREGNANCY. GASTROTOMY SUCCESSFULLY PERFORMER.

By W. ROSS JORDAN.

The woman, æt. 29, was a patient in the Birmingham Hospital for Women. In April last she had inflammation of the bowels,

which threatened her life. In July or August she first felt the child, and in September she expected and prepared for her confinement. From this time she for six weeks gradually became smaller in size, after which she fancied she was in labour, being in great pain for three or four days. After that she had frequent shivers and a cold sensation in the abdomen. On the 13th December a swelling in the abdomen not larger than in ordinary pregnancy at six months was discovered, fluctuating a little towards the left side, and on deeper examination a round mass, like the placenta, between the umbilicus and pubis, and a harder projection to the upper and left border of the tumor. The cervix uteri was pushed up to the right side. The sound penetrating three and a-half inches pointed to the right groin and moved the round body felt in the abdominal examination. The recto-vaginal pouch was occupied by a hard rounded mass. On December 21st a puncture with the aspirator was decided upon, and a quantity of chocolate-colored fluid mixed with white flakes was drawn. Mr. Ross Jordan, from his examination on this occasion, came to the conclusion that the case was one of extra-uterine foetation. Two hours after, complete collapse came on, and hæmorrhage into the cyst or abdomen was suspected. Five hours after the use of the aspirator, an incision four inches long was made in the abdominal wall down to the peritoneum, when the cyst with the placenta under it presented. A clot of blood having been removed, the cyst, with a foot near the external opening, was drawn forward, but the wall of the cyst being thin, it ruptured, and through this opening the foetus was extracted. The placenta was left undisturbed, and the openings of the cyst and the abdominal wall were brought together by sutures of carbolized cat gut, leaving an open wound about two and a half inches long, which was covered with a layer of tenax, etc. The patient progressed favorably, and on the 1st and 2nd of January large fragments of placenta were discharged, and on the 10th of April she came to the hospital looking well with the wound quite closed.

NOTE ON THE DIAGNOSIS OF EXTRA- UTERINE PREGNANCY. .

By LAWSON TAIT, F. R. C. S.

The author thought that in these cases very little confidence should be placed in the statements of patients if they were not in harmony with physical signs. He had, in consequence of the history of her case given by a patient, been led to make an erroneous diagnosis, mistaking a multilocular ovarian tumor for a case of extra-uterine foetation. There were two circumstances which invariably accompanied extra-uterine gestation that has gone past the period. The first was due to the general excitement and congestion of the organs involved, specially to the enlargement of the uterus; and the second to the absorption of the liquor amnii after the death of the child. The conditions

with which extra-uterine pregnancy may be confused before the death of the child, were displacement of the normally pregnant uterus during the early months, pregnancy complicated with fibro-myoma or cystic disease of the uterus, and more rarely pregnancy of one-half of a double uterus. After the death of the child, diagnosis was more difficult, the two points in the history already mentioned were most important, auscultatory signs were of no use. The other conditions with which it might be confused were pelvic hematocele, ovarian tumors, especially dermoid cysts, cancer, fibro-cystic disease of the uterus, hydatids of the uterus, and phantom pregnancy. The uterus in extra-uterine pregnancy was always intimately associated with the tumor, and generally in front of it, moveable to a limited extent, and enlarged. The most important point was that the cervix is always patulous. Under such circumstances, if a foetal heart were audible, the case was clear. If the case were seen after the death of the child, the tumor would be soft, and besides obscure ballotement possibly a part of the child might be made out by internal or external examination. Of the three cases which the author had seen, two had been first pregnancies, and in neither had there been any troublesome pain, in the third there was great pain but the patient was seen during the false labor.

A CASE OF GASTROTOMY FOR SUPPOSED EXTRA-UTERINE GESTATION.

By ALFRED MEADOWS, M. D.

The patient, æt. 58, was admitted to the Hospital for Women, and had passed through the climacteric period nine years ago. She had great pain in the abdomen, which was enlarged by the presence of a tumor. Sixteen years since she fancied herself pregnant, and in due time had pains like those she had felt in her first confinement; these however gradually declined, and no child was born, and since that time she had considered herself to be carrying a dead child. On admission the abdomen was found to be occupied by a large tumor about the size of the uterus at term, tender to the touch, and apparently solid. The uterus was high up, and its cervix very small; the sound passed upwards and forwards two and a half inches. The balance of opinion among the author's colleagues being that this was a case of extra-uterine gestation, it was determined to clear up all doubts upon the matter by making an exploratory incision five inches in length between the pubis and umbilicus. A white friable mass was then discovered, having all the characters of malignant disease; it broke down readily, and two ounces of a thick brownish fluid escaped. Finding it impossible to remove the mass, the abdominal wound was closed. Fifty-three hours after the operation the patient died, and, upon opening the abdomen, the mass of malignant disease was found to be in the omentum, which overlapped the tumor and was about an inch in thickness. The

tumor itself, which was adherent in every direction, proved to be a large fibro-cystic tumor of the uterus. The author cited this case to show the difficulty of diagnosing abdominal tumors. Even with the aid of an exploratory incision a correct diagnosis of the character of the tumor had not been arrived at previous to death. He believed it to be the moral duty of every one to record his failures as well as his successes.

TREATMENT OF PNEUMONIA BY CARDIAC MEDICAMENTS.

By DR. MAX LEGRAND. Translated from *L'Union Médicale* for May 15, 1873, by JEAN PAUL BONSEUR, M. D.

The following is an epitome of the lectures of Professor G. Seë, delivered at the Charité:

Treatment by Digitalis.—This drug is the cardiac medicament *par excellence*, as many experimenters have proved. M. Marcy, professor to the College of France, held that digitalis increased the intravascular pressure, and by this means slowed the action of the heart, and also increased its strength. Professor Seë, while admitting the increase of the arterial tension, asserted that this was not the cause of the decreased action of the heart, that being influenced through the pneumogastric. La Pommeraye, MM. Tardieu and Roussin, show that section of the vagus nerve interferes with the action of the poison. That is true; but they do not entirely suppress its action. MM. Cl. Bernard and Vulpian demonstrate that, after section of the vagus, digitalis will still act on the heart. They are all right, relatively. Digitalis acts not only on the pneumogastric, but also on the intrinsic ganglion of the heart itself, and probably on the muscular tissue. We always observe in the physiological state, after the exhibition of digitalis, a decided slowing of the pulse, a considerable diminution in the amount of urea (from 20 to 30 per cent.), with a falling of the temperature from half a degree (Centigrade) to one, one and a half, or even two degrees; consequently, digitalis is one of the most energetic antipyretic agents in the materia medica.

Digitalis acts slowly; and, unfortunately, pneumonia always needs energetic interference, it being necessary to wait from twenty-four to forty-eight hours for the action of this drug, which often throws us on to the critical days. What is more, this being a cumulative drug, we must exercise great care in its administration.

Now, we can give five grammes of bromide of potash per diem to a patient; at the end of eight hours its action is over, the bromide being so rapidly eliminated. And so to determine the phenomena of intoxication in an animal, if we inject, to-day,

one milligramme of nicotine under the skin, it is necessary to use twice the amount to-morrow to produce the same effect, the system so soon becomes accustomed to it.

Digitalis comports itself otherwise; with a decoction of 0.50 centigramme of the leaves we obtain a slowing of the pulse after from twenty-four to forty-eight hours; and the dose being renewed, the diminished action is continued. It is important to be alive to its peculiarity, not to be impatient and force the dose for quicker action, or the gravest consequences may follow.

Administered in pneumonia, the temperature is lowered, with a decrease in the number of arterial pulsations; the fever is diminished on the first or second day after exhibition, similar to that which occurs naturally on the seventh day; which effect we have the right to claim for the drug.

The lowering of temperature is not always coincident with the decreased pulse-rate, the temperature falling first; oxidation being diminished, dangerous congestions of the internal organs do not follow. The fall is not always to the normal figure (37.5 deg. Centigrade), but descends to 40, 39, or 38.5 deg., where it stays.

En resume, *digitalis* does not abridge the duration of this disease, in spite of the assertions of Traube and Hirtz; the fever is not suppressed, but only diminished. We use this drug not to extinguish the malady, but to attenuate it.

Digitalis is useful in alcoholic pneumonia, and is very much used for this form of disease in America. The delirium appears not only in old drunkards, but in the habitual drinkers of wine: alcoholic delirium is a bad expression; a more correct one would be delirium from suppression of alcohol. The onset of the pneumonia is always sudden; the temperature rises in five or six hours to 39 or 40 deg. Centigrade. Wine is given to bring down the delirium, with a full dose of a narcotic, as we give in all violent affections of the nervous system. We also employ *digitalis* in large doses, without carrying it so far as the American physicians, who do not fear to prescribe fifteen to twenty, or even thirty, grammes of the tincture in the twenty-four hours. None of their patients die; showing that large doses are well supported in delirium. This is what they call a therapeutic tolerance.

PREDICTION OF SEX IN UTERO BY AUSCULTATION.

• By T. J. HUTTON, M. D., resident physician of Long Island College Hospital, Brooklyn, N. Y.

The pulsations of the fetal heart were first detected by M. Mayor, of Geneva, and in 1818 he published his discovery. For some time afterward the subject seems to have been forgotten,

and, on being revived by Kergaradec, was practised up to a recent date, simply for the purpose of determining pregnancy in doubtful cases. Within the past few years, however, the assertion has been advanced, by Tyler Smith and others, that not only can pregnancy in its advanced stages be determined by auscultation, but also the presentation, position, and sex of the fetus *in utero*.

While, then, utero-fetal auscultation as a means of determining pregnancy has been a part of obstetric literature for nearly fifty years, that part of it which proposes to determine the *presentation, position, and sex* of the child previous to labor, is comparatively new; perhaps not generally known, and doubtless but little practised. In considering these modern claims let us inquire,—May we always detect the fetal pulsations? If so, of what practical value? “It is a very rare circumstance,” says M. Dupaul, “for the pulsation of the fetal heart to be inaudible during the last three months of gestation unless the child be dead.” They failed to be detected in but eight cases out of nine hundred and six examined at this period. Of what practical value? “A discovery of *very great* value to the accoucheur,” says Tyler Smith. “A means of diagnosis never to be neglected,” says Cazeaux. “I have repeatedly found auscultation of incalculable value, and have been, I believe, enabled, by its evidence alone, to save in several instances the life of the child,” says Simpson, in referring to malpositions and tedious labors.

Its Value in Determining Sex.—All the difficulties and dangers of labor, all *post partum* complications, instrumental deliveries, fetal and maternal deaths occur much more frequently in male births; the ratio of their frequency as compared with the births of females is nearly as three to one. In foreknowing sex—if such be possible—may we not hope to anticipate, abbreviate, or prevent these justly feared accidents of the puerperal state?

Again, any just means that shall prove a master key to confidence and respect, any new acquisition of skill which will exalt the physician and his profession in the estimation of the people, must be worth acquiring. “A prominent medical gentleman of this city, in attendance upon a lady in her confinement, in which by examination he found by anus, tuber ischii, scrotum, and penis, there was a son to be born, notified the father accordingly, and, of course, a son was born. A few days after, the unlearned but delighted father sent the physician a check for five hundred dollars, remarking that any physician deserved that sum who could tell the sex before the birth.” In the present article, suggestive rather than exhaustive, I present to the profession the results of some observations in this direction, few in number it is true, but made, as will be noticed, at widely different periods, and with one and the same result. The rule employed is a modification of those advanced in recent text-books, viz.:—Fetal pulsations heard below a horizontal line dividing the uterus into

two equal parts denote vertex presentation; above it, breech presentation; below this and to the left, first position; below it and to the right, second position. When the fetal pulsations number one hundred and forty-four per minute, it is a female; one hundred and twenty-four per minute, male. And, as deviations from this rule or average will doubtless be encountered, I venture to add that a variation of six beats per minute from one hundred and twenty-four upward, or from one hundred and forty-four downward, will not endanger a diagnosis, provided auscultation be practised in the ninth month of pregnancy. And as a proof of the practicability and reliability of this rule as a means of diagnosing sex in utero, I submit the essential points from the clinical record of seven cases delivered in this hospital, the only ones in which I had an opportunity of testing it, in which it was the sole guide, and without a single failure.

[We omit the cases given, inasmuch as every physician has the opportunity of verifying the rule in his practice.]

In conclusion, I would add that while these observations open up an interesting field of inquiry, and, so far as my observations have gone, have been uniform in result, still, from their small number, I only claim value for them as they confirm the observation of others. The cases were most carefully analyzed, and I submit them to the profession, more for the purpose of attracting attention to the subject than for any supposed value that may be attached to the limited number of the observations themselves. Uniformity in the cases observed is of value, especially when they confirm the observations of others.—*N. Y. Medical Journal*.

ATHETOSIS.

By WILLIAM A. HAMMOND, M. D., Professor of Diseases of the Mind and Nervous System, and of Clinical Medicine, in the Bellevue Hospital, Medical College, etc.

[Read before the Medical Library and Journal Association, New York.]

There are several diseases, one of the chief manifestations of which is involuntary movement—the consciousness of the patient remaining intact. But that which I am about to bring to the notice of the Association had certainly never been recognized or discriminated from others somewhat similar till the publication of my Treatise on Diseases of the Nervous System, in which work I described it under the name of Athetosis, and gave the details of two cases, one of which had come under my personal observation. Since then other cases have been noticed both in this country and in Europe, and the affection has been generally regarded as being entitled to a separate place, and as being distinct from any hitherto known to exist as a pathological entity.

The name athetosis is derived from the Greek, meaning without fixed position, and is specially applied to designate the chief phenomena of the disease, which consists in an inability to keep the fingers and toes from continued motion. The movements are not disorderly, like those of hysteria, and chorea, nor so tremulous as those of paralysis agitans, and the various forms of sclerosis hitherto described. They are regular, and are to some extent under the control of the will—that is, by a strong effort of volition the patient can for a short time prevent them, but they soon reassert themselves, notwithstanding his most strenuous endeavors to keep the muscles quiet. Even during sleep the movements continue.

In two of the cases which have come under my notice, and of which I have complete histories, there were in the first instance paroxysms of epileptiform character. In a case which I exhibited to the class of the Bellevue Hospital Medical College last winter there had been no such attacks. They were not observed in Dr. Allbutt's case, nor in two which are now under my care.

The involuntary movements which occur in the fingers and toes are not simple oscillations such as are present in paralysis agitans and sclerosis of the brain and spinal cord, but are slow, and are apparently performed with deliberation. The thumb and little finger are more affected than the other fingers. Owing to the constant exercise, the muscles of the forearm become greatly enlarged and hard, like those of an athlete.

Pain is very generally complained of in the contracting muscles, and in one case caused very great distress.

The sensibility of the skin over the affected parts is lessened, and a feeling of numbness prevails more or less extensively over the side of the body corresponding to the disordered motility. In all other parts it is normal.

The causes of the disease have not been clearly made out as yet. In two of my cases, the patients were intemperate, as was Dr. Hubbard's case, but Dr. Allbutt speaks of his patient as a "temperate woman." Thus far, of the six cases known to me, two have been women.

Relative to the prognosis, no case that has come to my knowledge has been materially benefited by treatment, but death has not yet ensued in every instance, I am disposed to regard the disease as being slow in its progress, but as not being amenable to the action of remedial measures. In each of my own cases there has been a steady advance in the severity of the peculiar symptoms, but the general strength of the patient has not been materially impaired.

If attention be paid to the situation in which the disease is manifested and to the character of the movements, no difficulty will ordinarily be experienced in arriving at a correct diagnosis.

Still, it will probably not be considered out of place if I briefly recall the main features of those disease with which athetosis may possibly be confounded. I am, I must confess, more desirous of doing so, for the reason that such a comparison will show that the disease not under consideration is in reality a distinct affection.

DIFFUSED CEREBRAL SCLEROSIS.

In this disease there are muscular contractions, but they are tonic and permanent, and the affection almost invariably begins in infancy and leads to atrophy or arrest of development of some part of the brain.

MULTIPLE CEREBRAL SCLEROSIS.

Tremor is one of the principal symptoms of this affection, but tremor, though the result of muscular action, differs very essentially from the apparently deliberate and obviously regular movements of athetosis. Besides, tremor never leads to the hypertrophy of muscle so characteristic of athetosis. Moreover, another marked phenomenon of multiple cerebral sclerosis, festination, is absent in athetosis.

CEREBRAL HEMORRHAGE.

In cases of secondary degeneration of the spinal cord, resulting from cerebral hemorrhage, there are often involuntary movements, but they are always the consequence of attempts at voluntary motions, and, in addition, the history of the case will prevent any mistake being made in the diagnosis.

MULTIPLE CEREBRO-SPINAL SCLEROSIS.

In this disease the involuntary movements, which are in the nature of tremor, make their appearance after paralysis, and are only manifested when voluntary movements are made. There is usually festination. These points are sufficient for diagnosis from athetosis.

CHOREA.

Chorea is generally a disease of childhood. The involuntary movements are irregular, and the disease ordinarily yields readily to treatment. There is no pain, and sensation is not disturbed. The movements in chorea cease during sleep, while those of athetosis continue.

PARALYSIS AGITANS.

In this affection there is tremor, and not entire muscular contraction. There is no pain, no anæsthesia. The tremor usually ceases during sleep, and there are often intermissions during which the patient is comparatively quiet. There is no tendency to the tonic contractions which seem to ensue late in the course of athetosis.

EPILEPSY.

I should never have thought of mentioning this disease in

contradistinction to athetosis, were it not that M. Garnier imagines that athetosis is nothing more than the unilateral epileptiform convulsions, which almost every one has seen, and which are well described by Dr. Hughlings Jackson. Certainly if M. Garnier had ever seen a case of athetosis, or had even carefully read my description of it, he could not possibly have made the mistake of confounding it with any form of epilepsy. To be sure, athetosis often begins with epileptiform convulsions, but so do many other cerebral diseases. The spasms to which he refers are paroxysmal and temporary, while the movements of athetosis are continuous.

Relative to the morbid anatomy and pathology, nothing is known, as no post-mortem examination has yet been made in any case of athetosis. Physiology would, however, indicate the corpus striatum, and perhaps also the optic thalamus, as the seats of morbid process, and the diseased condition is probably sclerosis, which in its turn is the result of slow inflammation.

As regards the treatment, nothing has yet been efficacious in arresting the onward march of the disease, though galvanism has apparently exercised a slight controlling power.

Two cases of this interesting disease are described in my work on Disease of the Nervous System. One of them occurred in the practice of Dr. Hubbard, of Ashtabula, Ohio, and one in my own practice. This latter patient is here this evening, for examination by the members of the Association.

One other was before my class at the Bellevue Hospital Medical College last winter, and formed the subject of a clinical lecture.

Two others are now private patients of mine. All these cases present the same general features, and are undoubtedly instances of the same disease.

One case has been reported by Dr. Clifford Allbutt, as occurring in the Leeds General Infirmary, and which this able physician at once recognized as a case of athetosis.

There are thus six cases positively known to me, though my friends, Prof. Gross, of Philadelphia, and Barker, of this city, have informed me that similar cases have occurred in their practice.—*Medical Record*.

MEDICAL GLEANINGS.

ADMINISTRATION OF STRYCHNIA IN NERVOUS AFFECTIONS.—Dr. Chisholm (*American Journal of the Medical Sciences*, April, 1873) finds that, to obtain all the good that strychnia can produce, it is necessary to keep the system under the full physiological effects of the remedy by administering a dose as large as the patient can bear comfortably, and that a smaller dose will not

answer. Half a grain *per diem* he considers the maximum dose, but that this could be well borne by most persons. It is better borne when administered after a full meal, and the larger dose in morning. He finds that a large dose when taken by the mouth will produce the identical immediate and final results as when taken under the skin, and has abandoned hypodermic injections, which he first used. He administers sugar-coated strychnia granules, beginning with seven-thirtieths of a grain three times a day to guard against idiosyncrasies, and gradually increasing the dose to two granules of one-tenth of a grain each after breakfast, and two (or one) after dinner, and one after tea; 'the patient avoids the annoying effects of overcharging the circulation with strychnia, by taking only one pill at bed-time.' By this arrangement the patient takes half-a-grain per day, and the doses may be safely continued for months, or as long as they seem to benefit, and may be still further increased should they cease to excite the nervous centres. The good results are permanent.

NIGHT-SWEATS OF PHTHISIS.—In some valuable notes of practice in the Bellevue Hospital, New York, published in the *Medical Record* of that city, we find that for the relief of the above exceedingly troublesome symptom some patients are taking 1.60 of a grain of sulphate of atropia in solution *ter in die*; some are taking 1-100 of a grain at bedtime, and the success of this mode of treatment has already been sufficient to entitle it to further trial. Another plan of treating these night-sweats is also practised. It consists in taking the patient out of bed, if found sweating profusely in the night, sponging him with water as hot as he can comfortably bear, and, after being wiped dry and having his flannels replaced, putting him back to bed. It is stated that sometimes a single sponging will arrest the sweating for two or three days. In the French hospitals, according to a recently published thesis of M. Finot (*Rev. des Sciences Med.*), agaric, tincture of aconite, phosphate of lime, etc., are employed for the same purpose. The reporter in the latter periodical, M. Rabuteau, speaks highly of the efficacy of phosphate of lime.

COMPOUND DEPRESSED FRACTURE OF THE SKULL (*Irish Hospital Gazette*, July 1, 1873).—J. Stannus Hughes, M. D., reports a case in which the patient, having had his skull crushed by an accident, suffered the loss of large portions of the occipital and parietal bones. The removal of the fragments brought on a profuse hemorrhage from the longitudinal sinus, followed by the ejection of from three to five ounces of mingled cerebral substance and clotted blood; the brain could be seen pulsating strongly at the bottom of the wound. Contrary to all expectation, recovery was prompt and uninterrupted, except by occasional attacks of retention of urine and of intense priapism. The only permanent trouble resulting from the injury was an equilateral hemiopia, due probably to some lesion in the course of the left optic tract.

A PHYSICAL SIGN OF INTESTINAL PERFORATION.—We learn from the London *Medical Record*, that Dr. Spiaggia, of Palermo, reports the case of a woman named Marie Assunta Milia, aged 25, who died in the hospital after having suffered some days with symptoms of peritonitis and intestinal perforation.

At the necropsy, the intestines were found agglutinated by exudation, of not very firm consistence, and some pus lay between the convolutions. The mucous membrane of the duodenum was much congested; and in the small intestine, at considerable distance from each other, were three perforations, each about the eighth of an inch in diameter, with well-defined edges next the interior of the tube, and irregular on the serous surface. The small intestine was also much softened, especially in the neighborhood of the perforations; the mucous lining of the large intestine was much congested.

The point to which Dr. Spiaggia especially draws attention is the presence of a sound, which was heard on auscultation, a little more than an inch below the umbilicus. It was synchronous with inspiration and expiration, being more distinct with the former than with the latter. It resembled the respiratory sound as heard at the sides of the vertebral column in the upper dorsal region. After commenting on the mode of production of this sound, which he attributes to the passage of gas into and out of the peritoneal cavity through the perforations in the intestine, Dr. Spiaggia arrives at the following conclusions:

1. A murmur synchronous with the respiratory act, heard by auscultation over the abdominal wall, and resembling the respiratory sound in intensity and character, is a diagnostic sign of intestinal perforation.

2. The absence of this murmur is, however, no indication, when other symptoms of perforation are present, that this lesion has not taken place. The sound may be absent under various conditions, such as (a) Extreme smallness of the cavity into which the perforation leads, especially if it be seated deeply in the abdomen or removed from the ear of the observer by tumors lying anteriorly; (b) Closure of the perforation by a loop of intestine, or by a peritoneal tumor; (c) Intestinal adhesions; (d) The filling up, by previously formed exudation, of the cavity into which the perforation leads.—*Medical and Surgical Reporter*.

ERGOT IN DYSENTERY.—M. Luton, of Rheims, states (*Gazette Hebdomedale*, October, 1871,) that during an epidemic dysentery which lately prevailed at Rheims, he employed, in the cure of the disease, most of the remedies which are considered efficacious, and met with various degrees of success. The epidemic was not a very severe one, and most of the patients recovered; but, in the majority of the cases, it appeared to M. Luton that the therapeutical action was not very evident, nor the relief rapid; and

moreover, some of the patients, especially among the most aged, died. It was therefore desirable that some new method of treatment should be found, which might give more satisfactory results, and the opportunity of doing so was offered by the case of a female patient, who was suffering, at the same time, from uterine hemorrhage and dysentery. The ergot of rye was prescribed successfully for the former malady, and it was found that the latter was also benefitted by the remedy; and, in fact, as soon as the first doses had been given, a condition of constipation was induced, which lasted four or five days. This first experiment led to the use of ergot in simple dysentery, and it was found that an improvement in the symptoms, and eventually a complete cure, followed the new plan or treatment.

M. Luton gave the ergot in powder, in the dose of three grammes (about 45 grains) a day, divided into doses of fifty centigrammes (about $7\frac{1}{2}$ grains); and two or three days generally sufficed for a cure in ordinary cases. The ergot appeared to attack not only the hemorrhagic element of dysentery, but the whole disease; and the mucous secretions, the griping, colic, and fever, were equally relieved at the very commencement of the treatment.—*British and Foreign Medical and Chirurgical Review*, April, 1872.

INCEA.—A new poison has lately been discovered, called *incea*, which is said to be more subtle than digitaline. It is obtained, by pressure, from the seeds of *Strophanthus hispidus*, an apocynaceous plant, found in Gaboon; and from experiments made with samples of it, taken from arrows, upon which the natives place it, it appears to act more powerfully than even digitaline, and quickly paralyzes the heart. Three milligrammes kill a frog, a sparrow, or a dog; though the resistance of certain animals varies. A snail, for instance, requires five milligrammes; a mouse has withstood three milligrammes of the extract (obtained by macerating the seeds in alcohol), while this latter dose kills a dog nearly a thousand times heavier than the mouse. The heart comes to a complete stand-still after a few irregular efforts.—*New York Medical Review*.

TRAUMATIC RUPTURE OF THE TYMPANIC MEMBRANE (*British Medical Journal*, June 7, 1873).—Mr. W. B. Dalby reported ten cases of this accident. In six of them the wound healed, and, when no inflammation in the tympanic cavity followed, a few days sufficed for the perforation to close. In the other four cases the wound did not heal at all. When suppuration had been once established in the tympanic cavity the treatment pursued was the same as in cases where the perforation had been the result of disease, and consisted chiefly in the use of astringents. No treatment was adopted when the injury was not followed by inflammation of the tympanum. It was found that the

injury to the nervous structure of the ear behind the tympanum caused the loss of hearing, rather than the injury to the membrane, and that the greatest loss of hearing followed those accidents in which the greatest force was used in producing the rupture.

PROGRESS IN MICHIGAN.—Miss Dr. Frances A. Rutherford is Fourth Vice-President of the Michigan State Medical Society. She attended the recent session of the State Medical Society at Saginaw City. It is believed that this is the first instance of a woman's holding such a position in such a society in this country. Miss Rutherford is a graduate of a Philadelphia Medical College.—*Medical and Surgical Reporter*.

DEATH UNDER METHYLENE ETHER.—On Saturday last a patient on whom Mr. Lawson Tait was just about to perform ovariectomy, at the Birmingham Hospital for Women, died suddenly after the administration of five drachms of methylene ether. The anæsthetic was given through a single fold of a towel by the resident medical officer, and nothing noteworthy was observed during its administration. The pulse suddenly stopped, the pupils became dilated, and the respiration subsequently ceased. All efforts at restoration were fruitless. Post-mortem examination did not reveal the cause of death, the heart and all the other organs, except the ovary, being quite healthy. During life a halenic murmur at the base had been detected.—*London Lancet*.

NATURE OF MUMPS.—In a note on the above, read to the Academy of Sciences by Claude Bernard, the author, Dr. Bouchut, states that parotitis is simply a salivary retention due to catarrhal inflammation of the excreting canal of the parotid.—*London Lancet*.

PARALYSIS OF THE RADIAL NERVE CONSEQUENT ON EXPOSURE TO COLD.—At a recent meeting of the Societe de Biologie, at Paris, M. Vulpian brought forward an interesting case of paralysis of the extensors of the forearm. In the month of January last, a man, aged 43 years, slept in a very cold and damp room, and awoke with a sense of chill, numbness, and tingling in the right hand and forearm, attended with complete loss of power over the extensors of the wrist and fingers. He was perfectly sober, and had lain on his right side, with the right arm outside the bed, naked and pronated, and with his head resting on the external part of the arm. The muscles reacted energetically to direct faradization, which was employed for six weeks without any benefit. It was then perceived that direct electrization of the *radial nerve* had no effect on the extensors of the hand and fingers, and when the electric treatment was applied directly to the nerve the patient speedily recovered. M. Vulpian thinks it probable that the paralysis in this case was due to the action of

cold on the points where the motor-nerve fibres enter into an intimate connection with the primitive fasciculi of the extensor muscles of the hand and fingers. If this be so, the case would be somewhat analogous to what obtains in animals deeply curarized. In them, as we know from C Bernard's experiments, the motor nerves preserve their excitability, and the muscles their contractility, and yet electrization of the motor nerves produces no contraction in the muscles supplied by these nerves.—*La Tribune Medicale*, 27th April, 1873.

SUBCUTANEOUS CARBOLIC INJECTIONS IN INTERMITTENT FEVER.—M. Declat, at a meeting of the Academy of Medicine (*Gazette Medicale*, Dec. 28), stated that, in cases of intermittent fever, he makes, on the first day of treatment, four subcutaneous injections of 100 drops of a one per cent. solution of carbolic acid; the next day three; the third day two. The first operation, says the author, always diminishes the fever, and sometimes cures it; the second is sometimes a work of precaution; and the third is so almost always.

POSITION OF TWINS (*British Medical Journal*, June 28, 1873).—S. C. Taylor, M. D., writes that in thirteen cases of twins which he has attended the positions were as follows:

Both children with head presentation	-	-	-	6
Both children with breech presentation	-	-	-	2
First child head, second child breech, presentation	-	-	-	2
First child breech, second child head, presentation	-	-	-	1
First child head, second child foot, presentation	-	-	-	1
First child foot, second child head, presentation	-	-	-	1
Total number of cases	-	-	-	13

Book Notices.

SKIN DISEASES—Their Description, Pathology, Diagnosis, and Treatment. By TILBURY FOX, M. D. Second American from third London edition, re-written and enlarged. With a Cutaneous Pharmacopœia, a glossarial index, and sixty-seven additional illustrations. New York: Wm. Wood & Co. Cincinnati: R. Clarke & Co. 1873. 8vo. Pp. 532.

Previous editions of this work have met with great favor from the profession. The second London edition, although a large one, has been exhausted, and a third edition called for. Only about two years ago was the first American edition issued, and now is a second one required. Besides this, the work is about to be issued as a text-book in Italy. As the author very justly states, these circumstances may be regarded as conclusive evidence of the practical character and usefulness of the book.

The present edition makes the work practically a new one. It has left the author's hands re-written, and with the matter re-cast, re-

arranged, and re-illustrated, in such a manner that he is emboldened to hope that he has at length produced a work which may be looked upon as containing the latest, fullest, and best practical information of any book on the subject of skin diseases. The pathological sections have been particularly amplified.

We copy from page 57 the author's classification of skin diseases, which he prefers to that of any other:—

1. ERUPTIONS OF THE ACUTE SPECIFIC DISEASES (ZYMOTIC). These I need not specify in detail.
2. LOCAL INFLAMMATIONS, comprising—
 - (a) *erythematous* inflammations, including *erythema*, *intertrigo*, *roseola*, *urticaria*, *pellagra*, and certain medicinal rashes;
 - (b) *catarrhal* inflammation, or *eczema*;
 - (c) *plastic*, or papular inflammation, including *lichen* and *prurigo*;
 - (d) *bullous*, including *herpes*, *pemphigus*, and *hydroa*;
 - (e) *suppurative*, including those diseases that are essentially pustular,—ex. *ecthyma*, *impetigo*, *contagiosa*, and *furuncular* affections, inclusive of Delhi boil, Aleppo evil, and Biskra bouton;
 - (f) *squamous* inflammations, including *pityriasis*, *rubra* and *psoriasis*.
3. DIATHETIC DISORDERS, including *strumous*, *syphilitic*, and *leprous* diseases of the skin.
4. HYPERTROPHIC AND ATROPHIC DISEASES. Under this head are included, on the one hand, *pityriasis*, warts, *corns*, and *ichthyosis*, in which the epithelial layers are mainly affected, together with *keloid*, *fibroma*, *sclerodoma*, etc., in which the connective tissue is involved—amongst hypertrophies; and on the other, *atrophy* and *servile decay*, amongst atrophies.
5. NEW FORMATIONS, in which the neoplasm is the essential and only diseased condition present. This group includes *cancer*, *lupus*, and *redolent ulcer*.
6. —ex., *purpura*.
7. NEUROSES, such as *hyperæsthesia*, *anæsthesia*, and *pruritis*.
8. PIGMENTARY ALTERATIONS.
9. PARASITIC DISEASES, including—
 - (a) *animal* or *dermatozoic*, including *scabies*, or itch, and *phtheiri-asis*, or lousiness; and affections associated with the chigoe, the dracunculous, the leptus, fleas, bugs, gnats, etc.
 - (b) *vegetable*, or *dermatophytic*, including *tinea favosa*, *tinea tonsurans*, *tinea kerion*, *tinea circinata*, which embraces Burmese, Chinese, and other ringworms, *tinea decalvans*, *tinea sycosis*, *tinea versicolor*, *tinea tarsi*, *madura foot*, and *onychomycosis*.
10. DISEASES OF THE GLANDS AND APPENDAGES, including—
 - (a) diseases of sweat glands—ex., *hyperidrosis*, *anidrosis*, *chromidrosis*, *milairia*, *sudamina*, *lichen tropicus*, etc.;
 - (b) diseases of the sebaceous glands—ex., *sebæchea*, *asteatodes*, *acne*, *xanthelasma*, *molluscum contagiosum*, etc.;
 - (c) diseases of the hair and their follicles;
 - (d) diseases of the nails.

HANDBOOK OF PHYSIOLOGY. By WILLIAM SENHOUSE KIRKES, M. D. Edited by W. MORANT BAKER, F. R. C. S. With 248 illustrations. A new American from the eighth enlarged English edition. 1873. 12mo. Pp. 656. Philadelphia: H. C. Lea. Cincinnati: R. Clarke & Co.

This is undoubtedly the best work for students on physiology extant. We are not thus prompted to speak in praise of a work from a mere desire to laud it without reference to its having any merits or not, but from believing what we say to be true. We have had knowledge of the book for more than fifteen years, when Mr. Paget was associated

with Dr. Kirkes in its authorship, and during all this time we have regarded it *par excellence* as a handbook of physiology.

The work has now reached its eighth edition, which is quite satisfactory evidence that it is highly appreciated both in this country and England. And when any one comes to examine it thoroughly they will not be surprised at its popularity. Although of much smaller size than the generality of works of the kind, yet none of the essential points in physiology are at all neglected, but are treated at sufficient length for a clear understanding of them. Of course the book is entirely a new one from what it was originally. Keeping pace as it has been doing with the advancing knowledge in physiology, it has been so remodelled and rewritten that its reading matter is altogether changed. The plan of the work, however, as regards size and some other features, is the same as at first.

We advise all students to adopt it as a text-book, especially during lecture terms.

AN INTRODUCTION TO THE STUDY OF CLINICAL MEDICINE—Being a guide to the investigation of disease. For the use of students. By OCTAVIUS STURGES, M. D., etc. 1873. 12mo. Pp. 127. Philadelphia: H. C. Lea. Cincinnati: R. Clarke & Co.

This little work, as the title page indicates, is designed to aid the physician in his examination of a patient. The topics discussed are:—

1. The sort of help needed by the student at the bedside;
2. Some general rules with reference to the examination of patients;
3. The family and personal history of the patient;
4. Examinations of the functions;
5. Examination of the phenomena connected with the brain and cord;
6. The physical examination of the chest, its inspection and palpation;
7. Percussion applied to the heart and lungs;
8. Auscultation of the chest;
9. Examination of the abdomen and of the secretions;
10. The diagnosis;
11. The treatment.

The valuable information contained in this little work will commend it to both physician and student. In its 127 pages there are very many facts which it would be difficult to find anywhere else.

THE CEREBRAL CONVOLUTIONS OF MAN, represented according to original observations, especially upon their development in the fetus. Intended for the use of physicians. By ALEXANDER ECKER, Prof. of Anatomy and Comparative Anatomy in the University of Freiberg, Baden. Translated by ROBERT T. EDDES, M. D. 1873. Svo. Pp. 87.

This is not intended to be a phrenological work by any means, although the learned author believes that definite portions of the cerebral cortex subserve definite intellectual processes, and that there is a possibility that we may attain some day a complete organology of the brain-surface—a science of the localization of the cerebral functions. He thinks that Gall, in the beginning, followed the right road, yet he very soon departed from it, and, starting from the fact which, speaking in general terms, is perfectly correct, that the form of the skull depends on that of the brain, believed that he could replace the laborious and rare examinations of the dead brain by those of the living cranium. Hence, the so-called science of phrenology has remained since its beginning at the same point, and has fallen from the hands of earnest inquirers, especially the anatomists and physiologists, who turn away from it with deserved neglect, into those of an entirely different class. The traveling phrenologists who wander around with plaster heads of

Schiller, Napoleon, and some celebrated rascals, and cipher out a character from a number of bumps on the skull, are well known. Few of them have ever seen a brain.

The object of the work is to give a summary description of the cerebral convolutions. "In spite of the certain knowledge," says the author, "that the brain-surface is the organ of the soul, and in spite of the consequent urgent summons to the anatomical study of the cerebral convolutions, this was until very lately much neglected, or rather the clew was wanting to guide one correctly in this labyrinth. The convolutions were considered as a bundle without system, and the artists drew them as they might draw any dishful of *macaroni*. Comparative anatomy and the history of development first brought light into this darkness. It was at first gradually seen that certain furrows and convolutions are more constant than others. If we consider the arrangement of the convolutions in general, there may be distinguished first, chief or primary convolutions; then, secondary or subordinate convolutions; and, finally, tertiary convolutions."

The object of the book, therefore, is, as its title indicates, the study of the cerebral convolutions of man. The different convolutions are named and described--reduced to something like order--and the exceptions in their construction noted. The author does not attempt, after the manner of phrenologists, to allot separate functions to the different convolutions, although he seems to believe that each one of them has its function.

That the work will be found interesting to all who take pleasure in the study of anatomy and physiology we have no doubt.

CLINICAL ELECTRO-THERAPEUTICS, Medical and Surgical—a handbook for physicians in the treatment of nervous and other diseases. By ALLEN McLANE HAMILTON, M. D. With numerous illustrations. 1873. 8vo. Pp. 181. New York: D. Appleton & Co. Cincinnati: Geo. E. Stevens & Co.

This brief work is designed as a simple guide for the general practitioner, and will be found well adapted for its purpose. In presenting it to the profession, the author intends, as he states, to endorse electricity only as a *very* valuable remedy in certain diseases, not as a specific for every human ill, mental and physical.

The first part of the work is devoted to "Electro-Physics." In this part we have a very brief history of electricity, and then a description of different batteries, as Smee's, Grove's, Grevet's, Bunsen's, the Galvano-Faradic Manufacturing Co.'s, etc. etc. In the second chapter of the first part are considered the general laws of the induced current, theory of induction, rotary and chemico-magnetic batteries, etc.

The second part is devoted to "Electro-Physiology," in which we have treated the inherent electricity of animal bodies, phenomenon in nerve-trunks and muscles, action on the nervous system, influence upon the process of nutrition, and many other subjects which we have not space to mention.

The fourth part has its four chapters devoted to "Electro-Therapeutics," treating of the general consideration of electro-therapeutics, galvanization, faradization, diagnosis by electricity. The matter discussed under these headings is quite interesting and valuable.

Five chapters are devoted to the consideration of "Special Electro-Therapeutics."

We bespeak for the work great popularity in the profession. It fills a want which every practitioner undoubtedly has felt. Here we have in a small compass pretty much all that is known to be valuable in electricity.

Editorial.

DEATH BY CHLOROFORM.—We regret to be under the necessity of chronicling a death by chloroform, which occurred in this city, August 6th. The patient was Dr. W. H. Mussey's, who was about to amputate a thumb. There is every reason to believe that the chloroform was administered with ordinary care, but the accident was one of those that could not be foreseen or prevented.

We append some of the evidence taken at the coroner's inquest, which we quote from the *Cincinnati Gazette* of August 8th:—

"The first witness examined was Dr. W. H. Mussey, whose testimony we here submit: Mr. Hummler, came to my office about 11 o'clock Wednesday morning, having the first joint of the thumb of the right hand torn off and hanging by a little piece of skin. There was already a deformity of the hand from an injury which he received in the army. The bone of the next joint was projecting so that it could not be covered with skin. I found it would be necessary to remove a portion of the projecting bone in order to get a chance to cover it with a flap. I proposed to do it without giving him anything, but he said that he could not have it done unless he had chloroform. He said he felt faint, and I gave him two ounces of brandy in about four ounces of water before I commenced to administer the chloroform. When I commenced giving the chloroform it was about five minutes to 12; his brother was with him; I had no one else with me at that moment. The patient laid on a couch, and I gave him the chloroform on a handkerchief, which I held over his face in a manner to give him a fair proportion of air with the chloroform. About two minutes before 12 o'clock my nephew, Dr. Reuben D. Mussey, came in, and I handed him the handkerchief and the chloroform bottle, and he continued the application of the chloroform the same way. In about a moment the man made violent exertions as if to get away from us; we took away the chloroform; he then was taken with convulsions, as if in an epileptic fit; in about a minute after this seizure his breath became stertorous, and the length of time between the respirations became longer; when the fit came his face and breast became purple; I looked into his mouth to see if his tongue had fallen back, which sometimes happens when we administer chloroform; I took a forceps and drew his tongue forward, though it had not fallen back; I placed a porous towel over his mouth, and held his nose, and then inflated his lungs with my breath; we did this for some six or seven minutes, and I ordered my nephew to prepare the galvanic battery for use. I then applied this battery to the phrenic nerves, breaking the current about every two or three seconds, regular and irregularly. I then applied it to the phrenic nerves and the diaphragm, then over the heart. In that way, by pressing hard upon the chest with one hand, I made artificial respiration for at least five minutes, and then desisted to see the effect. Not finding any beneficial results from this treatment, my nephew again inflated the lungs; then we used the battery again. In all we were about twenty minutes in attempting to resuscitate him. He ceased to have voluntary action in breathing just after the bells stopped striking 12 o'clock; but the artificial respiration was kept up. The heart was the last to cease its action. My judgment about the cause of the death or the form of death is that it was from coma; that the blood poisoned or affected the brain; there are three forms of death from chloroform recognized; one from coma, where the brain is affected by the poisoned blood; the introduction of any anæsthetic will poison the blood; another form is by asphyxia, when the lungs cease to act first; this form is most generally produced by the closing of the

glottis by the tongue falling back on it, or the closing of the cartilages; the third is by syncope; that is, when there is a failure of the heart's action first. When the convulsion took place, and the condition of apoplexy appeared, the heart and lungs were still acting. I asked the brother if the patient had ever had fits or epilepsy that he knew of, as that is the form of death which would likely to attend an epileptic, or person whose blood was poisoned with something else beside the chloroform. He replied, "Not that he knew of; he believed not." I remarked that the convulsion was like an epileptic fit. This coma was not produced by rupture of vessels in the brain, but by suffocation, by the pressure of this poisoned blood on the brain arresting the venous circulation. I gave the deceased about two drachms of chloroform. He had a good pulse. I do not think there was much food in his stomach. My opinion is that the cause of his death was chloroform and the abnormal condition of his blood. Had his blood been in pure condition, I know the amount I gave could not have caused his death, except for the other causes I have mentioned. I have given as much as four ounces, and have administered it a thousand times, but never had an accident before. I have practiced for the last 25 years."

Dr. Roberts Bartholow, being duly sworn, testified as follows:

"I am a practising physician; office 47 West Eighth street. The usual method of giving chloroform is by pouring it on a handkerchief or towel, or a funnel extemporized with a sponge placed in it, and placed in the mouth and nose of the patient. The symptom of danger of poison by chloroform is cessation of respiration and of the heart's action. The quantity administered to the deceased was not unusual. It was a small dose. There are no certain rules for giving chloroform, except that it should not be given to drunkards or persons having fatty degeneration of the heart. You can scarcely tell a death resulting from chloroform by a post mortem examination. I consider the manner in which Dr. Mussey gave the chloroform as perfectly safe, and have often given it so myself."

Dr. H. A. Clark made a post mortem examination of the body of the deceased, and reported as follows:

"I made the post mortem examination at 8½ o'clock on the afternoon of the 6th. The body presented a healthy appearance, was well formed, and in good condition. The thumb of the right hand was nearly severed by a lacerated wound just above the last joint, being merely held by a piece of skin. There was a contused wound of the temple, just above the outer corner of the right eye. It was recent, and involved only the skin. There was the mark of another contused wound on the right side of the head, above the ear. These wounds of head had produced no obvious effect on the brain. Upon opening the body the lungs were found slightly congested, but otherwise healthy. The mucous membrane of the windpipe was slightly reddened; the heart was found empty; the left ventricle contracted; right ventricle contracted; the valves perfectly normal. The blood was in a fluid condition; stomach, liver, and intestines healthy. The kidneys were uniformly congested, but not to a very marked degree. Other urinary organs healthy. Brain, with its membranes and arteries, presented an abnormal appearance. The quantity of cerebro-spinal fluid was larger than usual."

Joseph Siefert, and Mrs. Susan Hummler, wife of the deceased, also testified, but no new facts were elicited.

The following is the verdict:—"We, the jury, find that the deceased came to his death from the effects of chloroform administered to him by Dr. W. H. Mussey at his office, about 12 o'clock Wednesday, August 6th, 1873. We further find that, in administering the chloroform, Dr. Mussey used all due care and skill."

SLAUGHTER OF THE INNOCENTS.—In looking over the lists of death from the report of the health-officer for the week commencing August 9th, as published in the *Cincinnati Commercial*, we were astonished at the great mortality of children of five years of age and under. For the first day, twenty deaths are reported. Of these *eleven* were two years and under. For the second day fourteen deaths are reported. Of these one was six years of age, and the remaining *eleven* were two years and less—in other words, *six-sevenths* were children, two only being adults. The third day we have twenty-nine deaths set down: *five* stillborn; *twelve* one year and under; *one* three years; *one* six years; *ten* ten years and over; of adults that were twenty and over, *seven*. The fourth day the report gives twenty deaths. Of these the age of one is not stated; *two* were three years old; *six* were less than a year; *ten* were over twenty years, one of them being seventy-five. Fifth day twenty deaths: *twelve* two years and less; *one* five years; *six* over twenty; the remainder ranging between five and twenty, the oldest fifty-seven—only three-tenths adults. Sixth day seventeen deaths reported, the age of one not stated; *six* two years and under; *ten* over twenty, one seventy years. Seventh day fourteen deaths: *nine* under two years; *five* over twenty, the oldest being fifty-seven years; *none* between two and twenty-two years.

We presume that the record of deaths of infants and children compared with the whole number of deaths would exhibit a like result in other large cities; probably even a greater mortality of those from two to five years old and younger, in comparison to the whole number, would be shown in some; but that does not detract from the frightfulness of the exhibit we have made. On the 10th of August, the second day of our record, we have twelve children dying to two adults—in other words, while the causes that affected adult life were slight, the destruction of infant life went on undiminished, being even greater than on some days when more adults died.

The question naturally arises, whether something or not cannot be done to check this fearful mortality among the very young—this slaughter of the innocents; for we can consider it in no other light than that of a slaughter. Certainly there must be some special causes which operate among them, and it seems to us that if they were investigated many of them might be removed. When the death-rate is at its minimum among adults, we find but little or no diminution in the mortality of infants. We think that if at this time some of our medical science was directed to the causes that tend to produce disease among children, greater results would be gained than in any other department of medicine.

WHAT DARWINISM MEANS.—The *Lens*, of Chicago, makes the following correction of current misapprehensions as to the true meaning of Darwinism:—"Prof. EDWARD S MORSE," says the *Lens*, "delivered, early in March, two lectures in Chicago, the one with the title 'From Monad to Man,' the other on 'Evolution.' In the lecture on 'Evolution,' Prof. Morse makes two statements worthy of special note. In the one he alleges that the prejudice against Darwin, and the ridicule so freely expended upon him, are based on an entire misapprehension. Darwin has never taught that man is a development from a monkey, or from any lower species. Nor is there anything in his philosophy that even admits of inference to this effect. He simply teaches or suggests the probability that man or monkey is simply 'evolved' from a lower basis of life. The several streams all starting from one source—as they branch, the one goes to the monkey and there stops, and the other to man and there stops. It is not Darwinism that man himself, or the monkey itself, shall keep on till there is development into some-

thing higher and different. The other statement was to the effect that science deals with phenomena, not with the intelligent cause. It notes and defines laws; has nothing to do with the creator of the laws. Science therefore cannot take the place of religion. And when the man of science passes from the law to the author of law, he drops the character of scientist and assumes to teach religion. The scientist is not, therefore, censurable for restricting himself exclusively to the phenomena, making no reference to the power lying behind phenomena."

THE POPULAR SCIENCE MONTHLY for September is on our table, and has the following contents:

The Glass Sponges, by Rev. S. Lockwood (illustrated); The Constitution of Matter, by Fernand Papillon; The Great Nebula in Orion, by R. A. Proctor; Old Continents, by Prof. A. C. Ramsay; Magneto-Electric Illumination, by Wm. Crooks; The Study of Sociology—Preparation in Biology, by Herbert Spencer; The Intellectual Power of Birds; Hypnotism in Birds, by Prof. Joseph Czermak; Tongueless Speech, by Dr. W. J. Youmans; The late Prof. John Tarry (portrait); Editor's Table. Literary Notices. Miscellany. Notes.

Published by D. Appleton & Co. Price \$5 per annum. It is a magazine of the very highest order.

THE MEDICAL REGISTER AND DIRECTORY OF THE UNITED STATES.—We have received several advanced sheets of this important work, which is in process of publication by Drs. Joseph M. Toner and S. W. Butler. It is to comprise the names, post office address, and educational status of the physicians of the U. S. (regular, eclectic, homœopathic, etc.); lists of medical societies, colleges, hospitals, and other medical institutions, with abstracts of the medical laws of each State; and brief notices of mineral springs and other health resorts, etc. The whole systematically arranged by States.

All physicians are requested to send immediately their names, post office address, at what college they graduated, etc., to Dr. S. W. Butler, of Philadelphia, in order that the same may appear in the directory when issued.

The work will be furnished to those who have subscribed for it at \$4. It will be sold to non-subscribers at \$5.

HALF-YEARLIES.—We are in receipt of the July number of *The Half-Yearly Abstract of the Medical Sciences*, vol. lvii. This is a well known work, re-published in this country by Henry C. Lea, of Philadelphia. It contains the cream of the medical journals, for the past six months, of Europe and America.

Price \$2.50 per annum when taken alone; but it and the following journals are furnished at the unprecedented low price of \$6, free of postage, viz.:—*The Half-Yearly Abstract*, 600 pages per annum; *American Journal Medical Sciences*, 1150 pages per annum; *The Medical News and Library*, 600 pages per annum. The first is published every six months, the second quarterly, and the last monthly.

The Half-Yearly Compendium of Medical Science, for July, Part xii., has also come to hand. This is an American work, published by Dr. S. W. Butler, of Philadelphia. It is peculiar in giving more selections from our home journals than any other half-yearly, although the foreign journals are largely represented in its pages. In comparison it will in no wise fall short of the best.

Price per annum \$3.

THE CINCINNATI MEDICAL NEWS.

VOL. II.

CINCINNATI, OCTOBER, 1873.

No. 10.

THE PRE-TUBERCULAR STAGE OF PULMONARY TUBERCULOSIS.

By A. P. DUTCHER, M. D., Cleveland, Ohio.

That there is such a stage of this malady as the pre-tubercular, will not be denied by any one who regards phthisis a constitutional disorder; that there are symptoms and physical signs indicative of this peculiar condition of the system, sufficiently marked to be of practical value, will not be so readily admitted. It is common with many practitioners to overlook the lesser symptoms of the constitutional disorder, and seek those which belong to the local lesion, and if there be no evidence of these, give a favorable prognosis, and dismiss the patient with some trifling prescription in no way calculated to meet the wants of his case. His disease is thus suffered to progress until the lungs become involved, and little if any benefit can be derived from medical treatment.

I am aware that the great majority of phthisical patients do not apply for advice until they have passed beyond the precursory stage of the affection, and it is not very often that we have the opportunity of carefully studying their symptoms. But I am quite satisfied from my own experience, that there are certain symptoms, which belong to the pre-tubercular stage of this disorder, that are generally very manifest, and may lead to its detection before the deposit of a single tubercle in the lungs.

But some may ask, "What do you mean by the *pre-tubercular* stage of phthisis?" Authors commonly describe three stages of this malady, namely: the stage of deposit, the stage of softening, and the stage of expulsion. That which we now describe, is *that antecedent morbid condition of the general system which precedes the local development of tubercles*; a state eminently characterized

by some special degenerative changes in the blood, which renders it unfit for normal nutrition and maintenance of healthy action in the tissues of the body.

In some constitutions this blood dyscrasia is more marked than in others, so much so that death will sometimes occur before the local lesion has made serious progress. Every physician who has been much in the habit of making post-mortem examinations, must have seen cases of this description; the patient succumbs to the constitutional disorder. When this dyscrasia is very slight it will frequently produce derangements in the various organs of the body, which cannot fail to attract the attention of every careful student of the laws that govern the human body in health and disease.

I. GENERAL SYMPTOMS OF THE PRE-TUBERCULAR STAGE OF PULMONARY TUBERCULOSIS.

The symptoms of this stage of phthisis may be depicted as follows:—The countenance is dejected; the eyes are dull; the lips have lost their cherry red, and when the cachexia is very decided they incline to purple; the complexion is sallow; and the hair of the head is very dry. The pulse is accelerated, and the respiration is hurried, and very much increased in frequency by even moderate exertion. The appetite is variable; and the bowels frequently out of order, sometimes costive, but more frequently relaxed; in the latter instance there is commonly symptoms of indigestion, and the food, although taken in sufficient quantities, is imperfectly assimilated, consequently the muscles become flabby, the body emaciates slightly, its weight is materially lessened, and the individual complains of a want of strength and ability to engage in any of the active pursuits of life.

The excretory functions are generally very imperfectly performed, with the exception of the skin, which is more active than common, yielding an increased quantity of perspiration, which reduces the temperature of the body; hence the patient complains at times of chills, flashes of heat, cold hands and feet. They always require an extra amount of clothing to maintain a comfortable degree of warmth, and are very sensitive to changes in the weather. The urine is commonly scanty, and in most of the cases that have fallen under my notice, oxalate of lime was

present in large quantities, particularly where indigestion was a marked feature of the affection.

They also at this stage of the disorder frequently complain of thirst, dryness, and sometimes a burning heat in the mouth and throat, with a feeling of soreness about the larynx; and the slightest external pressure in this region will excite coughing. On inspecting the throat, the tonsils will sometimes be found slightly enlarged, and the mucous membrane of the pharynx very red and dry. In some instances the individual is troubled with aphthae upon the tongue, cheeks and lips; a sure sign of approaching phthisis in the adult where it is habitual. In the great majority of cases, even at this early stage, Thompson's gingival margin will sometimes be clearly defined upon the gums—an outstanding sign of the tubercular cachexia. Although every other symptom of the disorder may be absent, we need not hesitate a moment to pronounce the case tubercular if this streak is upon the gums.

Patients suffering with the pre-tubercular stage of phthisis sometimes complain of pain in the chest, and palpitation of the heart. The pain is usually neuralgic in its character, wandering from one locality to another, sometimes in the side, sometimes just under the sternum, then again between the shoulders or under the scapula, but never very intense. There is not unfrequently considerable tenderness along the dorsal vertebrae. The palpitation of the heart is ephemeral, and is commonly produced by sudden changes in the posture of the body or strong mental emotions. Several years ago I attended a very intelligent lady, who died with phthisis, who informed me that the first symptom of ill health that she felt, was a slight palpitation of the heart while she was engaged in the performance of her usual domestic duties; and that it was but a very short time afterward when she commenced to have more threatening symptoms of the disease. At this stage of the affection the pulsation of the heart is more frequent than in health; and the reason for this is found in the deteriorated quality of the blood, thus imposing an extra burden upon the circulating organs to carry it to the ultimate tissues of the body. The nervous system is also very impressible, easily excited by the varying conditions of the mind and surrounding circumstances.

At this stage of the disease there is commonly a slight cough,

sometimes dry, but more frequently attended with expectoration. When the bronchial tubes are very much irritated or inflamed, there will usually be copious expectoration. The prevailing character of the sputum is mucus; at first it may be glairy, and when dry will shine like silver; if the blood malady has made considerable progress, it will be slightly viscid, frothy, and faintly yellow, particularly in the morning. When examined by the microscope, it will be found to contain withered cells and shrivelled nuclei. In one instance I detected these histological elements in the sputum of a phthisical patient two years before there was a single physical sign to indicate the presence of the local lesion. The presence of withered cells and shrivelled nuclei in the expectoration, are highly indicative of approaching tubercular deposits in the lungs. They show very clearly that the blood is rapidly degenerating into that peculiar dyscrasia which must, if not corrected, ultimately lead to the development of pulmonary tuberculosis and all its destructive sequences.

Hæmoptysis is also a frequent symptom of this stage of phthisis. Some of our best writers on this subject tell us that hæmoptysis does not commonly make its appearance until tubercular deposits have actually formed in the lungs. But I have met with cases where it has occurred long before there was a single physical sign of the local disease. I have had a woman under my care, for more than ten years, who has had the tubercular diathesis very clearly marked; she has a decided proclivity to phthisis, her father and mother having died with it. During the time mentioned, she has had several attacks of profuse hæmoptysis, but at no time has there been a single physical sign of the disease, excepting prolonged expiratory murmur, and that but very recently. Her blood-making organs are very feeble, and her blood is always deficient in its solid constituents; the bronchial mucous membrane delicate, the depraved blood is freely exuded into the bronchi, and hæmoptysis is the consequence. That she will ultimately fall a victim to pulmonary tuberculosis I have not a doubt.

During the pre-tubercular stage of the disorder in females the menses are usually scanty or suppressed, but not always so. I have known instances where they were very profuse, occurring at short intervals, exhausting the patient's strength very rapidly,

and thus greatly adding to the tubercular cachexia. When the menses are suppressed the patient will be troubled with leucorrhœa, and its attendants, pain in the back, limbs, and head, with bearing down pains in the lower part of the bowels, with a frequent desire to urinate. The walls of the vagina will sometimes be found very much relaxed, and the uterus slightly prolapsed, and unless the physician is on his guard he will be very apt to take all these symptoms as the mere expression of some local uterine derangement, while the great constitutional malady, which is the legitimate cause of all these difficulties, will pass unnoticed until the pulmonary organs have become hopelessly involved. We do not believe that uterine disorders are ever the primary cause of tuberculosis, but they may, and indeed do frequently hasten its development. And in females who have a marked proclivity to this malady, they may sometimes be looked upon as symptoms of that disorder which will ultimately absorb every other.

Such are some of the general symptoms that present themselves to our view in the pre-tubercular stage of phthisis. With three or four exceptions they are symptoms that are present in other diseases, and therefore cannot be regarded as altogether pathognomonic of this. But in estimating their value, we must study them individually and collectively, placing each one in its proper relation with the other; they will then present us with the materials out of which we may construct the fabric of a permanent diagnosis, one that will stand the test of rigid scrutiny and practical experience.

II. PHYSICAL SIGNS OF THE PRE TUBERCULAR STAGE OF PULMONARY TUBERCULOSIS.

These are not so obvious as the general symptoms. Indeed, I question whether there be any reliable physical signs of this stage of the disease. Dr. Edward Smith, of London, who has done so much to advance our knowledge of phthisis, maintains that there are physical signs, which are quite indicative of the existence of the disorder. In his new work,—*Consumption, its Early and Remedial Stage*,—he tells us that at this early period, before a single tubercle has been deposited in the lungs, inspection shows a marked diminution in the movements of the chest; that this diminution is not confined to the summit or sides of

the chest, but extends to all the movements of respiration. By this condition of the lungs the amount of air inspired is greatly lessened; hence the respiratory murmurs are more feeble. He considers that a diagnostic character of the weakened murmur, which precedes the tubercular deposit, as compared with the weakness caused by general debility, consists in the fact that, in the latter case, the normal intensity of the murmur is brought out by breathing, while it is otherwise in the former case.

Dr. Smith says, that "the feebleness of respiration is seen both in the ordinary and in forced respiration. In ordinary respiration, not only is the breath-motion small, as it is also in chronic bronchitis, but the effort is feeble, and without that violence which is found in bronchitis. There appears to be not only lessened respiration, but less power to respire, as is evident to the most careless observer. In forced respiration it is, however, better marked, for it is much more difficult to train such an one, than one in health, to perform deep and slow respiration, both because the habit of shallow and feeble respiration prevents him from duly apprehending what is required, and from his inability to inspire deeply. Such a person, when required to breathe deeply, performs quick and short acts of deeper inspiration, analogous to the short action of a pair of hand bellows when suddenly snatched open or suddenly pressed down. The deep and slow inspiration which alone would fill the bellows (to continue the illustration) he does not easily apprehend, and cannot readily perform. This we believe to be in part due to a forgetfulness of the proper habit of breathing, from the long continuance of an abnormal mode of breathing, and partly to inability to perform what is required. Moreover, it very often occurs, that when such an one is taking a deep inspiration, the inspiratory muscles too soon cease to act, and the chest suddenly falls to a certain extent, while he believes that he is still inspiring. This is most commonly seen in persons who are much enfeebled, and who, having lead a very sedentary life, have not invoked the full power of the inspiratory muscles."

* * * "Feebleness and shallowness of the respiration are commonly associated, and we think that these two qualities must be taken together when considering their nature and effect, and that there is such a dependence of the one upon the other, that feeble breathing will induce shallow breathing." Both of these

conditions Dr. Smith affirms exist in the pre-tubercular stage of phthisis.

Dr. Lawson takes very nearly the same view of this matter as Dr. Smith. "The condition of the chest," he says, "in this stage appears to be one of debility of the moving powers of the parietes, and consequently the movements are restricted, and dilatation becomes comparatively incomplete; hence inspiration during tranquil respiration, reveals limited expansion, *extending equally to both sides*. The distinction between this condition and those which occur in tubercular deposits are very marked and characteristic, and can leave no doubt as to the state of the parts. Thus, the diminished movements of the precursory stage are equal on the two sides, and exhibit merely *restricted action*, and *not change of character*, the expansions being sufficiently uniform, although restricted. In ordinary tranquil respiration in this stage the expansion is comparatively small, and the motion proportionally less at the apex than at the base, but a full inspiration restores, almost perfectly, the harmony of the movement, the dilatation taking place gradually from below upward, the ribs swelling outward, as in the physiological state. Forceful inspiration, therefore, restores the diminished expansion; and herein consists the especial difference between the movements in this state and that which occurs after tubercles have been deposited. In the latter condition, the expansion of the apex cannot be restored even by forcible inspiration, nor is the action of that physiological type which exhibits a gradual swelling from below upwards."*

Dr. Austin Flint, whom we regard good authority on all questions pertaining to percussion and auscultation, has very little confidence in these signs, as means of diagnosing phthisis at this early stage. In an article published in the January number of the *American Journal of the Medical Sciences*, 1863, page 93, reviewing Dr. Smith's book, he says: "Diminished respiratory movements, lessened vital capacity, and enfeebled respiratory murmurs, express deviations, not from any fixed normal standard applicable to all healthy persons, but to a standard of health proper to each individual. There is a wide variation in these among different individuals in health. All who have given attention to examining healthy chests must be aware of this fact.

* Lawson's Phthisis Pulmonalis, page 326.

To be able to judge any case, with respect to these signs, we must know the healthy standard in the person examined. This knowledge we seldom have, because persons in health do not present themselves for examination. The difficulty would not be nearly so great if the signs which have been mentioned were confined to a portion of the chest; we should then have the advantage of a comparison of the two sides. We confess we are unable to understand how the author can come to a conclusion respecting a general diminution of the breathing movement, of the amount of inspired air, and of the respiratory murmur, in individual cases, unless it has so happened that he is familiar with the patient's condition in these respects when in health."

In a case like this where writers differ so widely in opinion, it is difficult to determine which is the true one. The only way that we can arrive at the truth is to submit the whole matter to the test of practical observation. I am not aware that any one has yet done this. I do not, perhaps, regard Dr. Smith's opinion on this subject as highly as I ought, for the fact that he seeks to make use of it with a view to overthrow the present received doctrine of the origin of pulmonary tuberculosis. He considers this lessened respiratory motion something more than a physical sign of approaching tubercular deposits. He more than intimates that phthisis is a local disease, originating in the feeble or lessened action of the air cells. The air cells, he maintains, are of a very delicate organization, and highly endowed with nervous influence from the cerebro-spinal, excitor-motory, and sympathetic system, and are extremely liable to their special diseases, particularly tuberculosis, which may soon follow their lessened action.

If there is lessened mobility and diminution of the vesicular murmur, as maintained by Drs. Smith and Lawson, previous to the actual deposit of tubercle in the lungs, I must say that I have never been able to detect it. Neither can we subscribe to Dr. Smith's theory of the origin of pulmonary tuberculosis. It is a heresy ignored by the entire pathological teachings of the day. But in this connection we should not neglect to observe that we have occasionally met with cases of this disease, where there was prolonged expiratory murmur, that under proper treatment has disappeared with the restoration of the patient to health. What the precise condition of the air cells were that

produced this abnormal sound we cannot positively say. But we have sometimes conjectured that it possibly might have been produced by the presence of tubercular matter in the first stage of its deposit, and that by improving the general condition of the system, and correcting the constitutional vice, it has been absorbed, and the lung restored to its normal state. The absorption of tubercular matter, before it becomes consolidated, is now admitted by some of our best writers on pathology.

Dullness on percussion is also mentioned by Drs. Smith and Lawson as a physical sign of the pre-tubercular stage of this disease. But this is not in harmony with the general teachings of percussion. To have dullness on percussion, sufficiently marked to be of any practical utility, there must always be more or less consolidation of the lung, either from pleuritic effusion, pneumonia, or tubercular deposits. The location of dullness on percussion mostly points out the nature and extent of the disorder; thus, if it is elicited at the summit of the chest on but one side, it is indicative of tubercular consolidation; when confined to the inferior portion it is generally a prominent sign of pneumonia. Dr. Smith says that this dullness is over the whole chest, and that it is owing to the absence of a full amount of air in the air cells. This, he thinks, he has ascertained by a newly invented spinometer, which shows that the quantity of air admitted in the lungs, in this stage of the disease, is much less per minute than in healthy persons; that in no small proportion of such persons the natural capacity of the chest is smaller from a contraction of that cavity in all its diameters.

"In the early stage of phthisis," observes Dr. Smith, "before there is any evidence of the deposition of tubercle, there is an appreciable degree of dullness on the clavicles, and, indeed, over the chest in general. This is not found in the earliest condition, but only after the diminution in the expansion of the lung has continued for a long time. It arises no doubt from the absence of the full amount of air in the lung tissue, which was common in health, for in such cases we cannot doubt for a moment that the solid tissues bear a larger proportion to the volume of the lung than occurs when the air vessels are unusually expanded. Some may think this to be over-refinement, and question its truthfulness; but let such examine the percussion note of the clavicles in old cases of bronchitis, and the doubt will be re-

moved, for no one believes that in such cases there is the deposition of solid matter in the lungs, or any large accumulation of blood there in the absence of the winter increase of dyspnœa, and yet the percussion note is duller than is found in conditions of phthisis far more advanced than those now under consideration. There is also, in long continued bronchitis, a state of collapse of the apices, as is evident by the depression which is found above each clavicle, even when the arms are pulled down; and without entering into the question as to the precise cause of this, we may remark that the fact is commonly the same in old people."*

Dr. Lawson says, "in consequence of the diminution of the mobility of the thorax and its contracted state, the sound elicited by percussion is less clear than pertains to a perfectly physiological type. This diminished resonance extends over the whole surface; and, although its marked condition is in the superior part of the chest, it has a greater extension than can be anticipated if it preceded from tubercular deposits. In addition to these characteristics, it will be observed that the dullness is equal on the two sides, instead of being developed exclusively at one apex, as usually occurs in the tubercular deposits. In these examples, the parieties of the chest seem more rigid and unyielding than in the other conditions; although the percussion sound is not positively dull, as when a solid substance is interposed, there is nevertheless an appreciable diminution of natural resonance."†

From our own experience we could not say that dullness on percussion is a sign of this stage of phthisis. We think it is far from being settled that a narrow contracted chest is a cause of pulmonary tuberculosis. Neither is the mechanical compression of the lungs, by hypertrophy of the heart, effusion from pleuritis, and the like causes, very apt to favor tubercular deposits in the lungs. A simple want of expansion in the air cells can never originate it. There must first be the constitutional dyscrasia; then perhaps a contracted chest, and a feeble action in the air cells may be an incidental cause, among numerous other agencies, in inducing this fell disease.

Auscultation and percussion, therefore, furnish us nothing

* Smith on Consumption, page 112.

† Lawson's Phthisis Pulmonalis, page 327.

that is reliable in making out a diagnosis of the pre-tubercular stage of phthisis. We must interrogate exclusively the general symptoms. That these furnish evidence sufficiently conclusive, will be doubted by no one who has studied them with that attention their importance demands. Loss of flesh hurried breathing, a rapid pulse, indigestion, hæmoptysis, expectoration containing withered cells and shrivelled nuclei, and Thompson's gingival margin, when grouped together, all point with unerring precision to the nature of the malady. The physician who can close his eyes against the threatening dangers brought to light by these symptoms, and dismiss a patient with an indifferent prescription, is not a careful or wise practitioner of the healing art. This is the stage in which to strike a blow for the permanent eradication of the malady. If the disease now progresses in spite of treatment, it will inevitably prove fatal. So take warning, and let not the enemy with which you contend catch you napping.

CONTRIBUTION TO THE ETIOLOGY OF TYPHOID FEVER.

By J TRUSH, M. D., Prof. of Physiology in Cincinnati College of Medicine and Surgery.

The importance which is attached to the causation of diseases may, it is hoped, be accepted as sufficient excuse for presenting, in a condensed form, an article upon this subject by Dr. Hägler, of Basel, Switzerland, published originally in the *Duesches Archiv für Klinische Medicine*, vol. xi.

In August, 1872, typhoid fever, in an epidemic form, made its appearance in the little village of Lausen, distant some ten miles from the city of Basel; and so suddenly and almost simultaneously were a large number of persons in different parts of the village stricken down with the disease, that it was manifest to every one that the exciting cause in all these instances must be one and the same.

Now, in the village of Lausen, there had not been, within the memory of man, an epidemic of typhoid fever in existence, and during a great number of years not a single case of this disease had occurred either in the village itself, or in the valley above and below the same. Consequently, neither the atmosphere nor

the soil could be looked upon as the carriers of the typhoid fever poison. As such, however, the *water* used for drinking and cooking purposes proved to be, in the most unmistakable manner.

The village of Lausen lies in a fertile valley of the Jura Mountains, namely, that of the Ergotz, 1135 feet above sea level. It is located upon the left bank of the stream just named. The railroad from Basel to Olten leads past the village. The dwelling houses, ninety in number, mostly quite old, but constructed of solid stone, are located on four nearly parallel running streets, intersected by numerous cross passages. The population at the time of the outbreak of this epidemic numbered about 780.

The soil of the valley is an alluvial limestone grit, with occasional strata of clay. It is consequently not one which is readily penetrated by liquids or gases, and its extensive infiltration by the contents of privy vaults but little to be apprehended. The water level in this soil, as demonstrated by the few existing wells, corresponds exactly with the stage of water in the Ergotz, ranging in different parts of the town between thirty five and sixty feet below the earth's surface. The Ergotz is a rapid mountain stream of pure and usually clear water. Swamps and stagnant water in the vicinity of the town are unknown.

All the inhabitants of Lausen, except those of six houses which are located near the four corners of the town, obtained their water for drinking and culinary purposes from four public fountains, which are fed from a common source, a spring issuing from the foot of a hill called the "Stockhalden," and lying a few hundred yards south-east of the village. At this point, *i e.*, at the apparent origin, the spring is securely housed in, and the water thence conducted through good wooden tubing to the stone fountains in the village. A contamination of this water between its apparent source and the town is therefore out of the question. The occupants of the said six houses derived their drinking and cooking water from the wells above alluded to.

The laboring portion of the 780 inhabitants are occupied partly in tilling the soil, and partly in preparing and weaving of silk at their homes, and working in the three factories located in the immediate vicinity of the town. With these varied sources of employment at their command, the inhabitants are all above want, and well nourished.

The village of Lausen and surrounding country is noted for the salubrity of its climate, the rate of mortality having always been very low. Epidemic diseases of any kind have been exceedingly rare, and always limited to a few cases. Typhoid fever, as already remarked, had not shown itself in the village for a great number of years. This, too, notwithstanding typhoid fever is endemic in the neighboring city of Basel, with which the people of Lausen are in daily intercourse. Lausen must, therefore, be regarded as a more than ordinarily favored locality, affording apparently no suitable conditions for the development of typhoid fever.

In June, 1872, however, a farmer, by name of Schaub, living about a mile south of Lausen, in a small branch valley (elevation of farmhouse above sea level, 1284 feet), was taken ill with typhoid fever, believed to have been contracted in some of the neighboring villages, the farmer being also a cattle dealer, and as such absent from home a great part of the time. The attack proved to be of a severe grade, attended with complications and several relapses, so that Schaub was not fully convalescent until about the middle of September following. About the 10th of July, a girl 11 years of age, fell sick with the same disease in Schaub's house, and during the first half of August the wife and son of the farmer were also taken ill with typhoid fever. These facts, however, at the time, were almost unknown in the village of Lausen, inasmuch as the occupants of the isolated farmhouse had but little intercourse with the people of the little town. Hence the outbreak of the epidemic in the latter, on the 7th of August, was entirely unlooked for.

On that day, the 7th of August, ten persons were taken sick with typhoid fever, and nine days later fifty-seven individuals were already confined to their beds with the disease. From the beginning the cases were distributed pretty uniformly throughout the entire town; rich and poor alike were attacked, with the sole exception of the occupants of the six houses, who derived their water supply from private wells, and not from the public fountains. Towards the close of the epidemic, after more than one hundred persons had been stricken down, two cases did occur in one of the favored six houses, but the individuals in question admitted to having drunk repeatedly at the public fountains, and had also been in constant intercourse with the people of the infected dwellings.

On the 30th of Oct. the last new case presented itself, and by the latter part of November the disease had entirely disappeared. The duration of the epidemic, therefore, may be said to have been about three and a half months. Within this space of time 130 persons, or about 17 per cent. of the entire population were seized with the disease. Of these 130 cases, 8 terminated fatally; hence a mortality rate of 6.1 per cent. It should also be stated that the attack in upwards of three-fourths of all the cases fell within the first three weeks of the epidemic.

So large a number of persons taken ill within the brief space of three weeks made it evident that *one and the same cause* had given rise to the disease in them all, and, under the surrounding circumstances, the drinking water alone could reasonably be looked upon as the carrier of the typhoid fever poison, but only that which was derived from the public fountains. It was certainly most improbable that the atmosphere was harboring the poison, because, as already stated, no typhoid fever was in the valley, either above or below the town, and from the infected farmhouse of Schaub the town was separated by the Stockhalden, a hill rising upwards of three hundred feet above the level of the valley; and the little side valley in which Schaub's house was located did not open against the town, but towards the fields, a considerable distance below the village, and the small brook which issues from this side valley, and runs past Schaub's dwelling, pours its waters into the Ergotz also quite a distance below Lausen, so that in this direction Lausen seemed to be quite safe.

Nor yet was there any reason whatever to suspect the soil in or about the village as the bearer of the poison.

But, plain as it was to every one, that the spring at the foot of the Stockhalden, and this alone, could and did contain the typhoid fever poison, it was not so easy to determine how and where the waters of the same became infected. Inasmuch as a malicious contamination of the spring was not to be thought of, and as the only source from which this water could, by any possibility, be contaminated was the Schaub family, scientific investigation was set on foot with a view to discover how the typhoid fever poison found its way to the Lausen spring through the base of the Stockhalden.

The gentlemen engaged in this investigation succeeded in establishing, in the most conclusive manner, the following facts:

1. Soluble substances and possibly solids, of minute microscopic size, when poured into the little brook at Schaub's, find their way into the spring upon the opposite side of the Stockhalden, and may be detected in the water of the public fountains. The time necessary for percolation through the base of the hill varying from three hours to half a day and more.

2. A ditch leads from Schaub's manure pit and privy hole to the little brook, distant about one hundred yards from these receptacles of human and animal excrement, and when these pits are full, conducts the excess of putrescent matters into the little stream.

3. The typhoid fever dejecta from the Schaub family were not buried, as directed by attending physician, but were thrown into the above named ditch, the manure heap and privy, when, sooner or later, they found their way into the little brook. It is likewise highly probable that the liquid contents of the privy find their way into the brook also by percolation through the soil.

From the foregoing data Dr. Hægler draws these conclusions:

1. The epidemic of typhoid fever at Lausen was the direct result of the infection of the public spring-fountains through typhoid fever dejecta, which, with other putrescent organic matters, had found their way into the little brook at Schaub's, and thence into the spring in question. Whoever *did not* drink the water of the fountains escaped, and again those who drank this water very freely fell more severely ill. This will not say that *every one* who drank of this water suffered an attack of typhoid fever. There are individuals in every community who seem to enjoy an immunity against every poison, be it typhoid, cholera, small-pox, or what not. It is, however, quite certain that of the 83 per cent. of the population of this town who escaped (130 persons out of 780 were attacked) the great majority did not partake of the infected water, at least not *unboiled*, because all those who worked in the factories, or out in the fields, drank water from other sources; and many others quenched their thirst with the cheap wines of the land, or with milk, preferring these drinks to the fountain water, because, as many of the people expressed themselves, "it had at times a very disagreeable taste."

2. *Water*, contaminated in the *same manner* as now, by putrescent matters from Schaub's privy and manure pit, has for many

years past been consumed by the inhabitants of Lausen without ever producing a single case of typhoid fever. It was only after this water had become poisoned with typhoid fever dejecta that it was capable of generating the disease. Hence we must conclude that to the production of typhoid fever, a specific poison, originating with typhoid fever patients, is necessary.

3. The typhoid fever poison is not rendered inert, or at all events not always, by being mixed with water, and by percolation through rocks and soils even for long distances, and hence ordinary soil filtration offers no guarantee for disinfection.

A few more words in reference to treatment. This was very simple. At the outset most of the cases received a laxative of calomel: one to one and a half grains. Subsequently, whenever the thermometer indicated a body temperature of 103 degrees, F., the patient was placed in a cool bath, 70 to 80 degrees, F., for from ten to fifteen minutes. Cases which proved unusually stubborn received, in addition, digitalis, or veratrum, and large doses of quinine. From twenty to thirty grains of the latter were given within an hour, and this quantity repeated after the lapse of twenty-four or forty-eight hours, according to indications. The patients were also freely supplied with nutritious liquid food, and received a liberal allowance of wine.

EXTRACT OF PINUS CANADENSIS FOR MALIGNANT DIPHThERIA.

Since the first introduction of this *new medicine*, I have taken much interest in observing its action.

The Pinus Canadensis has long been known to possess valuable medicinal properties, yet its application has been limited; but under this special form it has been thoroughly tested in a great variety of diseased conditions. In fact, it appears to occupy such a wide range that it seems almost a newly-discovered agent.

Several medical journals contain valuable articles upon it, written by men whose opinions are entitled to high consideration; among these are Drs. J. Marion Sims, W. Walker, J. C. Whitehill, P. A. Morrow, O. E. Newton and others.

I can fully adopt all that these writers have said, having used this extensively in the diseases referred to by them. I have employed it in a large number of cases of the varied forms of ulceration with perfect satisfaction.

I have administered Kennedy's Concentrated Extract of Pinus

Canadensis in the treatment of a disease one of the most dangerous and fatal that we have to contend with, with a success I had never met with before. The disease referred to is that of malignant diphtheria. I will give a single case to illustrate.

Miss —, aged 18, was violently attacked with the symptoms which attend this disease in its most malignant stages. It had passed into what is regarded by the profession as the last and incurable stage; in fact, in thirty year's practice I have never seen a case recover under any form of treatment where the local and constitutional condition of the system was like this. All the hectic symptoms were present; constant diarrhea, great emaciation, extreme prostration, fever of a typhoid character, the tongue and fauces heavily coated, extensive ulceration, almost impossible to swallow even the smallest quantity of beef tea, the anterior and posterior nares were completely obstructed by the peculiar secretions which attend such cases, and there was a constant purulent exudation of the most offensive character. I had the case under treatment from the commencement, and the disease resisted every effort which I made by the ordinary means. In fact, the case was so alarming that little or nothing could be expected in the way of recovery. I made use of this remedy as follows:

℞	Conc. fluid ext. Pinus Canadensis,	3 ij
	Aqua pura,	3 viii.

Sig.: One teaspoonful taken into the mouth, allowing it to remain a few minutes and then to be ejected; immediately after which the same quantity was to be swallowed. This could only be done by great effort and the holding of the head in a position which favored the process of swallowing; this to be repeated every half hour until four doses of each have been taken, after which it was to be used once every hour. In three hours from the time the first spoonful was swallowed a change was manifested. The patient was able to swallow beef tea without so much pain and difficulty. In fifteen hours from the time the first dose was given there was not a particle of the coating on the tongue to be discovered. The appearance of the ulcers was favorable, and the nasal obstructions were entirely removed; the alarming symptoms subsided, and convalescence was fully established; recovery was rapid. I continued the use of the medicine, reducing its strength one-half, and administering it at intervals of two hours for ten days, at which time all medicines were discontinued. I will repeat that at the time of beginning the use of this medicine the strength of the patient was so completely exhausted that she was unable to rise from her bed or to stand upon her feet. Without conjecturing why this agent, possessing in its chemical constitution the same properties contained in many other remedies, should be more successful, I must cordially recommend this preparation to the careful con-

sideration of the medical profession, especially in the treatment of this form of the disease.

Since writing the above, I have treated other cases presenting similar characteristics with like results.

ON THE THERAPEUTICAL USES OF GALVANISM.

By Dr. SAMUEL WILKS, F. R. S.

It must be generally admitted that the therapeutical uses of galvanism have received a fresh impulse since the introduction of the continuous current into practice. Until a few years ago the only method in use, except frictional electricity, was that of faradization. This was sometimes beneficial, but as often quite valueless, so that galvanism was either indiscriminately recommended in all forms of paralysis, or was systematically neglected. A very different feeling, however, prevails at the present time, for we are beginning to discern in what cases faradization is useful, and in what cases it fails; more particularly has it been noticed that it is in those very cases where faradization has been useless that the continuous battery current has been so fruitful of results. We some years ago introduced into our electrifying room a large battery, in which any number of cells up to one hundred could be combined, and with this instrument we have witnessed a success in many cases which scarcely could have been anticipated. We have a large number of patients daily being operated upon, and two or three attendants constantly employed either in the room or in the wards. It has not yet been satisfactorily determined why one form of galvanism should fail to stimulate a muscle and be useless as a remedy, while another form excites it to contraction and is curative. This may be dependent upon the condition of the muscle or of the nerve which supplies it, or the centre whence the nerve springs; at the present time the facts themselves are not sufficiently established, but when they are so we shall be able to use them as a means of diagnosis. All I shall attempt to do here will be to state some of the facts we have observed, and thus offer a small contribution towards the material out of which some more important conclusions may be eventually framed.

In the first place, we had no sooner possessed our battery than we discovered its marked value in cases of simple paralysis of the limb. In these cases faradization often fails to produce the slightest effect, whereas the application of the continuous current immediately excites the muscles to contraction, and eventually brings about a cure. A good case of the kind I give below. Then, again, in various forms of paraplegia, its good effects have been most striking. As I have before said, it is most difficult

to ascertain, in various forms of paralysis, whether an organic disease of the cord exists or not, seeing that all the symptoms which attend it may occur in the case which is functional and curable, and therefore it is true that galvanism has been used in many cases and failed; but, on the other hand, we have had a variety of cases which may be included under the term paraplegia, where a complete cure has been effected by applying the current to the back. In some cases of locomotor ataxy I have witnessed perfect recovery, both in hospital and private practice; also in cases of commencing progressive muscular atrophy. In paralysis agitans I never saw much good done by faradization or any other remedy, but in a case I mention below it appeared as if much benefit might accrue from the use of a continuous galvanic current down the spine. In no case is the effect of the continuous current to the limb so remarkable as in the atrophic paralysis from lead, two examples of which I shall presently relate. The fact has now for some time been observed that the muscles in this affection are not susceptible to the interrupted current or faradization—that a painful amount of it may be used, and yet there shall be no response on the part of the muscle. I have had several cases in the hospital which completely establish the fact. On the other hand, if the continuous battery current is used, even in a mild degree, excitation immediately occurs; that is, when the current is completed and again broken.

In the very first case on which I experimented, some years ago, we found, in the case of a young man suffering from lead paralysis, that whereas no irritation of muscle could be displayed by the magneto-electric machine, immediate contraction took place on the application of fifteen cells of the battery—an amount which produced a scarcely perceptible effect on the arm of a healthy student.

It is observed that as the cure progresses so the susceptibility to the continuous current becomes less, and that to faradization greater, until, as in the healthy subject, both forms cause contraction of the muscles. The case of lead is very striking, because there are kinds of paralysis in which the two forms of galvanism act in the opposite manner; thus, lying in a bed near that of our patient, who was the victim of lead poisoning, was a girl suffering from old-standing spinal paraplegia; in her case the continuous current produced not the slightest effect in stimulating the muscles of the leg, while faradization produced strong and painful contractions of the muscles. The same occurred in a man who had long been bedridden with an incurable paraplegia. It has been thought that faradization acts directly upon the muscle to stimulate it, while the continuous current acts through the nerve. This has by no means been proved, but if it had it might be used as an argument that in lead poisoning it is the muscular rather than the nervous system which is affected by the

metal. Such an opinion, however, is not borne out by experience, seeing that the whole cerebro-spinal centres may become atrophied in plumbism, as evidenced by epilepsy, general paralysis, or dementia. The atrophy resulting from lead differs from that which is called idiopathic in this respect, that although in the two cases no difference is observable in the form of wasting, yet in the latter there is very little susceptibility to either form of galvanism. It has been suggested by Dr. Russell Reynolds that there is no essential difference between the primary and the induced current, but that the simple interruption in the one case is sufficient to account for its peculiar effect—that muscles under abnormal conditions may not be able to take cognizance of a simple current passing through them, whereas they would if it were broken. If this were so, the primary battery current, if interrupted, should produce the same effect as the ordinary induced current or faradization. In one or two cases where the experiment was tried, the result did not verify the suggestion. Where, for instance, one pole was placed just below the elbow, and the other pole stroked down the arm, a contraction took place when it was lifted from the limb or again replaced. The current was then interrupted by a wheel, but exactly the same phenomena occurred, contraction on making and breaking contact, but none whatever as the sponge was stroked down the arm. With faradization, on the contrary, violent contraction took place. In this case, therefore, the difference between the two forms, even when both were made to intermit, seemed well marked. Further observations, however, are required before I could give a decision on this matter, either for or against the suggestion of Dr. R. Reynolds.—*Guy's Hospital Reports*.

A CURE FOR EPITHELIAL CANCER.

By GEORGE G. BREWER, M. D.

Whatever tends to increase our capability of coping with a formidable disease cannot be uninteresting to the medical profession. Although cancer is a common disease, and one with which the surgeon and pathologist is familiar, it is a lamentable fact that it often baffles all treatment. I have always thought that the surgeon's knife was the proper and only treatment for cancer of every description. But my experience in treating an epithelial cancer lately has greatly changed my opinion. The subject of the case was a gentleman of fifty years of age, stout and healthy. An epithelial cancer, about the size of a hickory-nut, located on the cheek near the ear. He consulted other medical gentlemen, who confirmed my opinion and advised him to have it removed. At his request, I removed it with the knife. Part of the wound healed in a few days, but the upper portion

soon sprouted out with the cancerous disease. I then applied caustic potassa, not only to it, but to a considerable margin around it. In about ten days after the sloughing was over I found that the entire margin had taken on the cancerous disease, and my patient was in a worse condition than before the operation. At my request, he consulted several surgeons, who objected to operating any more, for fear of enlarging the cancer, and advised a soothing treatment—poultices of bread and milk. This was followed without benefit for six months, when a friend gave him a recipe which I did not object to his using:

Chlor. zinci,	gr. viij
Bloodroot,	gr. v
Starch,	gr. viij

Make into a paste with honey.

The cancer was at this time nearly as large as a hen's egg. After applying the paste for two weeks, he called to see me. I found it had diminished to half its former size. I advised him by all means to continue it. After a month's use of the remedy, the cancer was not larger than a dime. He continued to use it until the disease was cured. There is at this time nothing but a cicatrix, where before was a large epithelial cancer. I report this case for the purpose of calling the attention of the profession to this remedy in epithelial cancer, and do recommend those who have such cases to treat to give it a trial.—*Medical Times*.

OBSERVATION UPON A CASE OF MIXED CHANCER AND BUBO.

By DR. P. DIDAY, of Lyons. Translated from *Annales de Dermatologie et de Syphiligraphie*, No. 5, 1873, by LOUIS A. DURING, M. D.

A young man, 25 years of age, came to consult me on the 8th of January, 1872. He told me his story as follows:

"I have a mistress, to whom I had always been faithful. On the 30th of December, 1871, for the first time in my life, I went to a public house. The 3rd of January, 1872 (that is to say, four days after), I perceived a small sore upon the penis."

I examined the patient, and recognized, upon the right side of the duplicature of the prepuce, an ulcer, presenting all the characters of the chancre or non-infecting chancre, already well developed in size and general features. I prescribed a dressing of charpie soaked in a solution of nitrate of silver.

At the expiration of two weeks the patient returned to show me a painful swelling in the right groin. I diagnosed a commencing acute adenitis. The chancre, which had been dressed very regularly, was already upon the way to recovery. The adenitis followed its fatally progressive course. Upon the 4th of February it was in a fluctuating condition, and I opened it, when several days later this opening presented a chancroidal aspect.

As a dressing, I employed here the solution of nitrate of silver. At the end of about a month both the ganglionic and integumentary chaneroids were healed. More than a month now elapsed, and I had entirely lost sight of the patient, when, upon the 10th of April, he returned, requesting me to give him my advice upon an eruption which annoyed him. I saw, indeed, a general roseola, some crusts upon the scalp, three glands enlarged on the back and high up on the neck, and some scales upon the palms of the hands. These symptoms, which were accompanied by pains in the head and stiffness of the neck, dated from about the 23rd of March. The inguinal bubo had cicatrized. Under the integument of this region, which was still red, a ganglionic enlargement of small size, but of firm consistence, was perceptible. There was a less marked enlargement of two ganglia in the left groin, which were indolent.

In a former communication to the Medical Society of Lyons upon a wholly analogous case, I described the generation and evolution of these mixed affections, which, from the chancreoid origin about the penis and groin, afterwards assume, at that point, the aspect of the primitive lesions of syphilis, and are followed in regular succession by the general symptoms peculiar to this disease. Above all, I insisted upon the causes of error that the association of these two distinct diseases can engender, and upon the consequences of these errors, fatal both to physician and patient.

To-day, studying another side of the subject, I will examine it in accordance with the doctrines, or rather the doctrine, which, it appears to me, the Faculty of Lyons have been too anxious to bury in oblivion. It is not, however, that I wish to dispute the certificate of death, quite *en regle*, which the Ecole de l'Antiquaille gave against it. But, nevertheless, I hear that the unity theory still lives somewhere in the heart of Austria, Bohemia, or elsewhere. We must then notice it here, if even for the last time. Now, what case, in appearance, was there ever more favorable to the old doctrine of the identity of the chancre poisons than that of which you have just heard the recital?

"What!" the Austrian says to me, "what! you, Monsieur Diday, a dualist, *you* report the history of a simple chancre, of a chancreoid? *you* describe it as a chancreoid, but you only give it the *name* of a chancreoid?"

"To complete the picture; it engenders a chancreoid adenitis, and when the secondary symptoms break out later, you change your position by saying that, without doubt, it was a case of mixed chancre. But what observation can remain firm upon such a statement? Do you think that it is sufficient to *suppose* the existence of an infecting chancre, when it is too late to prove it, to convince us that it really did exist?"

"The mixed chancre (*le chancre muet*), we know, can stand a

good deal, but by overstraining it do we not run the risk of running it into the ground.

"Even for their own good and preservation, ought not the dualists to connive at least at this one case?"

"Have they no pity on their old servant?"

To this valiant attack, gentlemen, I have but one word to say. As with many practitioners, I remember that upon that day I was very much occupied, perhaps a little absent-minded, and, relying upon the existence of the chancroidal adenitis as establishing the diagnosis of the primitive ulcer, I neglected, upon the *third visit* of my patient, to look at the side of the penis (of which he did not complain) and to feel the base of the ulcer and assure myself whether or not this base presented any induration.

But even in the absence of this information I can affirm not only that an infecting chancre existed there, but, further, that it developed itself upon the chancreoid or upon its cicatrix, about twenty-five or thirty days after its commencement.

Let us refer, in order to prove it, to that which we know concerning the evolution of syphilis. As a rule, especially when, as in the present case, no specific treatment intervenes, the secondary symptoms manifest themselves about six weeks after the commencement of the chancre. Now, in our patient the secondary symptoms were not manifested until eighty days after the beginning of the ulcer upon the penis. This ulcer then, which at its first appearance I recognized as being chancroidal, and nothing but chancroidal, is not the antecedent of these secondary symptoms. For, to borrow from medical jurisprudence one of its most expressive decisions, the symptoms first appeared too long after it to entitle it to be considered as the infecting source. The one source alone from which these symptoms can proceed is the other—the *infecting ulcer*—which I confess not to have looked for, but whose existence and paternity are clearly proven to me by the age of its offspring.

CLARK COUNTY MEDICAL SOCIETY—SEPTEMBER MEETING.

The above named Society met as per adjournment, on Thursday, Sept, 11th, Dr. J. H. Rodgers, President, in the chair. Members present, Banwell, Harris, Hazzard, Kay, Reeves, Reddish and J. H. Rodgers.

Dr. Harris reported an interesting case of heart disease, in a man 31 years of age.

Dr. Banwell reported a case of hemiplegia, supposed to be induced, at least in part, by the excessive use of tobacco. Dr. B. also reported a case of congenital hydrocele.

The above cases were discussed by Drs. Rodgers, Hazzard, Reddish and Harris.

Dr. Reeves reported several cases of dysentery. He thought there was a tendency to epidemic dysentery at present. Dr. R. then proceeded to point out the peculiarities of the cases now occurring. He thought that in fevers and other diseases prevalent there was an unusual degree of tenesmus, tormina, and other symptoms of a dysenteric character.

Dr. Rodgers had not met with so many cases of dysenteric complications with fevers as would warrant him in saying that there was a decided tendency of the kind alluded to by Dr. Reeves. He of course spoke only of his own experience. Dr. R. then discussed fully and ably the pathology and treatment of dysentery.

Dr. Reeves thought that physicians should always distinguish between typhoid and typho-malarial fevers. Dr. R. then proceeded to point out the essential difference between endemic, epidemic, and sporadic diseases, especially with reference to the diseases under consideration.

Dr. Kay discussed the nomenclature, pathological character, and therapeutics of dysentery. He thought there had not been a fatal case of this disease, during the present summer, in Springfield.

Dr. Rodgers spoke of the connection between dysentery and marshmiasmatic diseases.

This subject was still further discussed by Drs. Reddish and Banwell.

The Society then adjourned to meet again on the second Thursday in October.

CEREBRO-SPINAL MENINGITIS.

Maryland Epidemiological Association, Sept. 2, 1873.

Dr. Geo. G. Brewer read an interesting paper on *Epidemic Cerebro-Spinal Meningitis*. He spoke of the difficulty of treating this disease, on account of its modern discovery, unsettled pathology, and comparatively rare occurrence in this latitude. It was first observed in the south of France in 1837; since which time there have been 216 outbreaks of the disease in the United States. It usually makes its appearance in the cold months, generally in December and March. It is not generally regarded as a communicable disease; some suppose it to have originated in the fungus of diseased flour. The disease seems to be a form of typhus. Its treatment is not settled, but cupping the spine, cold applications to the head, and the administration of opium are strongly recommended.

Dr. Jno. J. Caldwell admitted that Dr. Hammond and some other leading physicians of New York considered cerebro spinal meningitis a form of typhus, but he was not prepared to accept

this. All modern authors had separated it and treated it as a distinct disease; and another distinction between it and typhus was the pathological lesions, the arachnoid being the point of election. Whereas, in typhus the mucous surface of the alimentary canal is at fault. The treatment also was essentially different.

Dr. Geo. L. Robinson held that the disease had the same origin and many of the features of typhus. The condition of the spleen is identical in both. The poison expends itself upon the nervous system, and there was a strong parallelism in the pathological lesions; but the convulsions of cerebro-spinal meningitis were absent in typhus.

Prof. John S. Lynch had met with cases of cerebro-spinal meningitis that had marked typhus fever symptoms. The disease might come from a stronger effort of the exciting cause. The rapidity of the disease, and the rapid formation of pus in the brain, were often marked features of this disease. Sometimes the pus was formed, although there were no symptoms of inflammation until a few hours before death. This seems to indicate that, while the disease may have a common origin, yet there seems a peculiar poison in cerebro spinal meningitis. The habitat of this disease in localities where typhus never appears, indicates, also, that it is a distinct disease. The treatment in Prof. Lynch's experience in Alabama, that seemed to have the best effect, was free and frequent doses of calomel, large doses of opium, and ice to the spine. Professor Byrd regarded the above as the best treatment, as he had witnessed its effects in Mobile.

Professor Thomas Opie held that the ultimate cause of the two diseases was the same, and the ultimate triumph of medical skill was by prevention of the disease. Drainage, better food, and other circumstances, had reduced the plague of the ancients to the typhus of the present. He commended the use of opium, but could see no reason for the use of calomel, since there was in this disease a depressed condition of vital function, and calomel was a de-vitalizer.

Professor Lynch said that the absence of inflammation, in many cases, was a marked feature of cerebro spinal meningitis. All cases of this disease are not rapid in their course. He had known cases to last months and then terminate fatally. He would give calomel because it seemed to affect the white corpuscles of the blood, and prevent the formation of pus.

Cerebro-spinal meningitis prevailed most when catarrhal fevers prevailed, and when there was most ozone in the atmosphere. This was not the case with typhus, and seemed to show a difference of cause.

Dr. Brewer remarked that in many cases of cerebro-spinal meningitis, there was no formation of pus in the brain.

Professor Byrd replied that pus was formed in most cases that

he had observed in Alabama. The rule was to expect pus somewhere about the base of the brain, but in some rapid and in some protracted cases none could be discovered. Sections on "Scarlet Fever and its Lesions" and "Puerperal Fever," were appointed by the Chair. The first consisting of Drs. Geo. L. Robinson, — Atkinson, and Chas. G. Hill; and the second of Drs. — Atkinson, Opie, Ogle and Miles.

The Committee, consisting of Professors Jno. S. Lynch, Harvey L. Byrd, and Dr. Jno. J. Caldwell, to whom was intrusted the preparation of resolutions of respect for the memory of Dr. Joseph C. Nott, late of New York city, and formerly of Alabama, reported eulogistic of his "blameless life and eminent skill; his untiring devotion and valuable services to the cause of medical science, which entitled him to the most honorable and emphatic public recognition," etc.

The resolutions were unanimously adopted, ordered to be spread upon the minutes of the Association, and published in the daily papers of this city.

On motion of Dr. Caldwell it was ordered that a copy of the resolutions be forwarded to the family of the deceased, and also to the Faculty of Mobile Medical College.

Dr. J. E. P. Boulden announced the death and gave a laudatory notice of the life and talents of Dr. Wm. H. Baltzell, a member of the Association.

Professor Byrd spoke of the professional ability and personal character of Dr. Baltzell, and appointed the following committee to prepare resolutions of respect for his memory: Dr. Caldwell, Robinson, Brewer, and Boulden. Several new members were elected.

J. E. P. BOULDEN, M. D.

—*Sanitarian.*

Corresponding Secretary.

NOTES OF HOSPITAL PRACTICE — PENNSYLVANIA HOSPITAL.

Service of Dr. R. J. LEVIS. Reported by JOHN B. ROBERTS.

FRACTURE OF THE CLAVICLE BY DIRECT VIOLENCE—THE POSTURAL TREATMENT.

A man fell from a loaded cart, fracturing his left clavicle near its sternal end, by the wheel passing in a vertical line over his chest. The clavicle is fractured more frequently than any other portion of the skeleton, as it is a delicate bone with two curvatures, is subject to powerful muscular action, and is so placed as to receive the transmitted force from blows upon the shoulder, elbow, and hand. It is sometimes broken by muscular effort, as in a case seen by Dr. Levis, where a woman sustained fracture of both clavicles in trying to lift a heavy child with each arm. In another case a man broke the bone in the exertion of raising himself from the ground by grasping an overhanging branch of a tree.

Usually the clavical is broken at the outer part of the middle third, or at the junction of the middle and *outer* thirds, for in this situation the bone is thinnest, and has the greatest amount of curvature and the least ligamentous and muscular support. There is a sort of intermuscular space between the trapezius and deltoid insertions externally, and the sterno-mastoid and great pectoral origins internally.

In this instance the injury is the more rare result of *direct* violence, and the fracture is found exactly where the force was applied. The deformity produced by the displacement of the fragments is perceptible to the eye, and can be distinctly traced by the finger. The outer fragment is drawn downwards, forwards, and inwards, by the weight of the arm and muscular action, while the inner one is drawn slightly upwards by the sterno-mastoid.

Of all fractures, that of the clavicle is most difficult to cure without deformity, for the reason that the application of efficient extension in the line of the long axis of the bone is impracticable. Whatever form of apparatus is used, there is always more or less displacement remaining; and it is doubtful whether in oblique fracture a cure without deformity is ever attainable.

The best results seem to be accomplished by simply keeping the patient in the supine position on a flat, hard bed, with the shoulders unsupported by pillows, but with the head somewhat elevated to relax the sterno-mastoid muscle, which tilts up the inner fragment. This treatment can be rendered still more efficacious by placing a weight, such as a bag of shot or sand, on the front of the shoulder, fastening it in position with adhesive strips to keep the shoulder and with it the outer fragment pressed backward.

The surface of the bed acts also as a splint, by making pressure on the angle of the scapula, and so giving a leverage which throws the upper part of the scapula upwards and backwards; of course carrying with it the outer fragment of the broken clavicle. This influence of the scapula in overcoming displacement can only be effected by treatment in the horizontal position.

As the clavicle is a spongy and vascular bone, consolidation soon takes place, and the patient need not be obliged to keep his bed more than a couple of weeks. If the union be not firm at the expiration of that time, some form of supporting apparatus can then be applied, and the patient allowed to go about. The general objection to this efficient plan of treatment is its irksomeness and restraint, and its inapplicability to restless individuals and to children; but it can be well carried out in adults under the discipline of a hospital.

In the present instance, as the man returns to his home and will be treated as an out-patient, the apparatus known as Levis's apparatus for fracture of the clavicle is applied, which fulfils

the indication as effectively as is possible, and is more comfortable to the patient than any other.

Dr. Levis stated that in fracture of the clavicle in young children, as the bone is short in comparison with the width of the chest, and there is but little tendency to displacement from muscular action and the weight of the shoulder, he relied on the simple plan of keeping the arm and shoulder supported by broad strips of adhesive plaster, which should be kept on for two weeks, and then replaced by a simple handkerchief-sling.

UNUNITED FRACTURE OF THE TIBIA—TREATMENT BY PERFORATING THE BONES AND CARTILAGINOUS CALLUS.

A woman, aged 40 years, sustained a fracture of both bones of the right leg, in the lower third, fifteen weeks ago. The fibula united without unusual delay, but the fragments of the tibia failed to consolidate, and at this time a false joint exists between the ends of the bone at the point of fracture. The unnatural mobility is somewhat restricted by the united fibula acting as a splint to the larger bone, but the amount of motion is nevertheless considerable.

There is evidently a mass of cartilage surrounding and uniting the fragments, in which, from some unknown cause, bony matter is not deposited. This case differs from those more rarely seen, in which there is an absolute deficiency of uniting material of any kind, which condition is that to which the term *false joint* is more correctly applicable. The present case is properly an illustration of simply a delay or check in the process of union.

In cases of delayed union a highly nutritious diet is proper, and when the fracture is in the leg the limb should be allowed to hang down below the rest of the body, in order that blood may be fully supplied for the reparative process. It is probable that this *natural position* of the limb would, if more generally resorted to, avert the permanent condition of false joint in fracture of the lower extremities. With such object the leg may be encased in some form of fixed dressing, and the patient allowed to walk on crutches.

Osteous consolidation will generally be insured, in cases of delayed union, by making strong friction of the broken ends upon each other, and at the same time, bending or breaking up the indolent cartilaginous callus. Such treatment is, however, inapplicable here, on account of the restriction of motion caused by the fibula, as a violent effort might re-fracture its recent bony union.

The plan determined on is the repeated perforation of the ends of the fragments and of their cartilaginous surroundings with a bone-drill, which will excite renewed action in those tissues. The instrument is inserted though but two points in the integument, but it is several times re-entered in the bones, and traverses the fractured extremities in a number of radiating direc-

tions. Some inflammatory action will probably be excited, and with it the completion of bony consolidation is hoped for.

After completion of the drilling operation the limb will be encased in a permanent or immovable dressing. For this purpose the Bavarian dressing of plaster of Paris is the best, from its ready application and removal: but bandages stiffened with starch or silicate of soda may be available.—*Med. Times.*

WHEN TO LANCE THE GUMS.

Dr. J. L. Smith says, in his late work on "Diseases of Infancy and Childhood:"—The gum lancet is now much less frequently employed than formerly. It is used more by the ignorant practitioner, who is deficient in the ability to diagnosticate obscure diseases, than by one of intelligence, who can discern more clearly the true pathological state. Its use is more frequent in some countries, as England, under the teaching of great names, than in others, as France, where the highest authorities, as Rilliet and Barthez, discountenance it.

It is well to bear in mind, as aiding in the elucidation of this subject, the remark made by Trousseau, that the tooth is not released by lancing the gum over the advancing crown. The gum is not rendered tense by pressure of the tooth, as many seem to think, for, if so, the incision would not remain linear, and the edges of the wound would not unite, as they ordinarily do by first intention within a day or two. This speedy healing of the incision, unless the tooth is on the point of protruding, is an important fact, for it shows that the effect of the scarification can only last one or two days. The early repair of the dental follicle is probably conservative so far as the development of the tooth is concerned. It may help us to understand how active, how powerful, the process of absorption is, if we reflect that the roots of the deciduous teeth are more or less absorbed by the advancing second set, without much pain or suffering from the pressure. If the calcareous particles of the teeth are so readily absorbed, what is the foundation for the belief that the fleshy substance of the gum is absorbed with such difficulty? Too much importance has evidently been attached to the supposed tension and resistance of the gum in the process of dentition.

Follicles in the period of development are especially liable to inflammation. We see this in the follicular stomatitis and enteritis so common when the buccal and intestinal follicles are in the state of most rapid growth. Does not this law in reference to the follicles hold true of those by which the teeth are formed, so that the period of their enlargement and greatest activity, which corresponds with the growth and protrusion of the teeth, is also the period when they are most liable to congestion and

inflammation? This fact affords a better explanation of the frequency of the so-called laborious or difficult dentition than that it is due to the resistance which dental evolution encounters from the gums.

If there are no symptoms except such as occur directly from the swelling and congestion of the gum, the lancet should seldom be used. The pathological state of the gum which would, without doubt, require its use, is an abscess over the tooth. As to symptoms which are general or referable to other organs, as fever and diarrhea, the lancet should not be used if the symptoms can be controlled by other safe measures. All co-operating causes should first be removed, when in a large proportion of cases the patient will experience such relief that scarification can be deferred.

If the state of the infant is such that life is in danger, as in convulsions, or there is danger that the infant will be permanently injured or disabled, as by paralysis, every measure which can possibly give relief should be employed without delay. In these dangerous nervous affections, therefore, the gums, if swollen, should be lanced. I know no accidents of dentition which require prompt scarification except suppurative inflammation of the gums, convulsions, and paralysis. In other cases the operation may be safely postponed till other measures have been employed.

SCHOOL POISONING IN NEW YORK.—A CORRECTION CORRECTED.

To the Editor of the Sanitarian.—In the August number of your admirable journal occurred an article headed "School Poisoning—A Suppressed Report." The article contains some unjust reflections on the late Board of Education, and, as I am in possession of all the facts of the case, I desire, with your permission, to place the matter in its true light before the readers of the *Sanitarian*.

Early in March the physician of the Board and the Superintendent of Buildings were directed by the Committee on Hygiene to inspect a number of the public schools of the city, with a view to ascertain what improvements were needed in order to put them in proper sanitary condition. It was about this time that the revolution in the city government (including the direction of the schools) began to impend, and in the then unsettled state of things, the contemplated inspection of the school-houses was deferred. The inspectors did not make the inspection, and, of course, made no report.

But then the question arises—How about that suppressed report? Its author was invited to make the inspection conjointly with the two officials above mentioned. But his report was

never handed in, either to the Committee on Hygiene or to the Board itself. Therefore, it was never rejected.

The article in the *Sanitarian*, furthermore, is calculated to do injury to the fair fame of the late Board of Education, by asserting that it was *they* that abolished the office of Sanitary Superintendent. That Board needs no defence. Its record sets it above all reproach. Dr. Holland does it simple justice when he says that the best course for the present Board to follow is to carry out the policy of its predecessor. They who are familiar with the history of the schools from the beginning of the year will not need to be informed that the abolition of the Sanitary Superintendency of Schools was the work, not of the late, but of the present Board. This is matter of history, and is unquestionable.

In the resolution which decided the question of sanitary inspection, the new Board of Education declared that there was no necessity for a sanitary inspector, and that the sanitary condition of the schools had not been improved. Here the Board are at issue with the medical profession generally, and particularly with that portion of it which is specially concerned with the question of Public Hygiene and Sanitation. The medical profession of this city, as represented by the presidents of the chief medical associations, recommended to the *present* Board the continuance of the Sanitary Inspectorship, but to no purpose. Is it not time that medical men should be strongly represented in the supreme council of education here, Mr. Editor? Look at the constitution of that body. Bankers, lawyers, merchants, politicians—all these are represented there; but there is no physician. Surely this state of things ought not to exist. Surely no man can say that the best interests of our schools are consulted so long as the very men whose whole life-studies fit them for the duties attached to the office of Commissioner are excluded or ignored.

I would suggest to you, Mr. Editor, that, if you are of an inquiring frame of mind, you investigate the sanitary condition and prospects of the schools under the present Board's management. Sectarianism has made a great stir in its meetings; Sanitarianism has been treated cavalierly. The necessary repairs to school-buildings, which ought to have been ordered at the beginning of the vacation, are ordered now only, toward the end of August. These repairs include the heating and ventilating apparatus, and have a necessary relation to the health of the pupils. It shows very grave negligence on the part of the authorities that these things were not attended to long since. Indeed, it looks as though even now these necessary repairs would not be made were it not that they are imperatively demanded. But our school system must be administered on broader principles, and with larger wisdom. But it is plainly an

error in our system of government that it should be in the power of any body of men to disregard the requirements of sanitary prudence. The intellectual training and the physical health of children in school must be secured by State legislation, and put beyond the reach of the storms of politics. It must not be said that a School Board can, at their pleasure, throw down all the barriers that protect the health of the pupils. I am disposed to think, Mr. Editor, that all that is needed in order to have the principles of sanitation accepted and enforced in our school system, is that medical men and journals, such as the *Sanitarian*, lay before the Legislature a plain statement of the high importance of sanitation, for the welfare of the rising generation in our schools.

Would it not be advisable for the State Medical Association at its next session to take this question in hand, and for county and local societies to lend their aid in securing for sanitary science the support of candidates for the Legislature? Though every man is profoundly interested in this subject, the direction of educated physicians is needed in order to build up a system of sanitary legislation which will be effectual. Let, then, every medical man bring all his influence to bear, to the end that the evils under which we now labor may be removed, and enlightened principles of hygiene enforced in all public educational institutions.

HYGIENE.

REMARKS.—To remove all misapprehension from our correspondent or other persons who would shift the responsibility for the unsanitary condition of New York school-houses, we are not dealing with "the late Board of Education," or the present Board or any other Board, as regards the relative merit. But with the Board of Education as an *institution*, supposed to be responsible for, and have the control of, the schools. And if either "the former," the present, or any other *personnel* of the Board for the time being is so wrapped up in the issues of politics as to be lost to the exercise of the functions of its especial trust, that is an additional evidence of its incompetency. But we could not, if we wished, treat of "the late" and "present" Boards as being the one more responsible than the other; for, in part, at least, they are the same men. And it was the *Chairman of the Committee on Hygiene of the "late Board,"* and a member of the present Board, who suggested to Mr. Leeds the examination which that gentleman made, and handed to him for the Board. After retaining (if that be a better word than suppressing) it for some time, covering the period of the transition of the *personnel* of the Board, and finding himself still a member, he handed it to the *Chairman of the Committee on Warming and Ventilation* of the "new Board." And between the two—the Chairman of the Committee on Hygiene of the "old," and the Chairman of the Committee on Warming and Ventilation of the "new Board"—

the report was kept, retained, or suppressed—no matter which—while a number of meetings were held, and until its author, despairing of its receiving any attention, called for it, and it was returned to him.

Technically, Mr. Leeds' report was not rejected *by the Board*, probably for the reason that it was not placed before them in session. But it *was* rejected—suppressed—by the duly authorized channels of communication, in that it was not presented in session. Our correspondent is correct in the statement that Mr. Leeds was requested to examine the school-houses conjointly with the Sanitary Superintendent and the Superintendent of Buildings. He *tried* to do so, but was unfortunate, in that those gentlemen failed repeatedly to keep their appointments with him for that purpose.

As to the act of abolishing the office of Sanitary Superintendent, we do not regard it as being any worse than the habitual neglect of his admonitions. And from the condition of the school-houses at the last time the *personnel* of the Board was in part changed, there is no evidence of his usefulness. We do not wish to be understood, however, as favoring that act; far from it. We emphatically believe such an officer necessary. But if the Board of Education is really so constituted as not to appreciate the importance of a Sanitary Superintendent, and the duly authorized committees simply receive his reports, and pocket or table them as they did the report of Mr. Leeds, and, as we are informed, the "late Board" likewise did with some of the reports of the Sanitary Superintendent—in such a case surely it is better to have no such officer than to keep him as a mere figure-head.

The repairs to which our correspondent alludes, as having just begun, appear to be limited to the newest and best school-houses; those in which repairs are least necessary. And so far as we are at present able to appreciate the work, it is a feeble effort at ventilation of such of the school-houses as are warmed by steam; and consists in making a coalescence of the foul air flues in the garret into one common exit. If the calibre of the foul air flues were first magnified about ten times, good results might be expected from the effort. But as the work is at present being carried out, it is futile. The old school-houses, those warmed by hot air furnaces, and with no provision whatever for ventilation, except the doors and windows, and a few wall registers, remain *in statu quo*.

The beneficial effects of ventilation in the saving of the lives of school children, seem as yet to have no appreciation in the minds of the gentlemen who compose the Board of Education. Old as they are, and competent as some of them ought to be, having served in the "late Board," they have not yet learned that even with full-grown competent men to appreciate defective

ventilation, *all* artificial means in schools, or other crowded rooms, requiring looking after and working by the hand, are worthless and dangerous to health and life. That nothing short of automatic currents will answer the purpose; and that there are no buildings in New York in so much need of such apparatus as the old school-houses, now awaiting their winter harvest of death from the rising generation.—*Sanitarian*.

CASE OF RESUSCITATION.

Dr. J. Marshall, of Limerick, gives the details of an interesting case, which demonstrates the value of artificial respiration even in cases that appear to be nearly hopeless. Dr. Marshall was sent for to attend a woman in her third pregnancy. She has been "attended" up to the time of her admission into hospital by an ignorant midwife. On examination, he found the right arm and funis (pulsating) in the vagina, and having returned the funis, he "turned" and delivered the patient of an apparently lifeless male child, so much so, indeed, that the funis was divided, without ligature, to see if any blood would escape from the child, the placenta having been born with the head. Not a drop of red blood issued from the cord, and the child never cried; while slapping, cold water sprinkling, and brandy application failed to elicit the welcome symptom of life. However, when placed on a table and in the light, the pulsations of the heart were faintly visible, so artificial respiration was at once resorted to; the first method tried being that of having one to breathe into the infant's lungs, and another to expel the air from the same. The infant having been laid on its back and rolled in a warm blanket, was so placed that the head extended over the edge of the table, and was allowed to droop a little to prevent the air passing into the stomach. The child's face was next covered with a towel, and the little nostrils having been compressed by the left thumb and forefinger of the operator (his right supporting the head), air was regularly but forcibly breathed into the lungs, and again expelled from them by an assistant pressing alternately with his two palms on the infant's chest; brandy being vigorously rubbed into the chest by an attendant. The treatment, *after an hour's* steady prosecution, and the heart's action scarcely detectable, was rewarded with one voluntary inspiration, but had to be immediately renewed after the gasp, which showed no signs of recurrence without the artificial respiration. Another single gasp occurred in half an hour, but the inflation, etc., had to be kept up, as the breathing apparatus had no strength whatever. Seeing the heart beating even so weakly, the attendants could not, nor were willing, to abandon the little

struggler, and each took his turn at the "breathing;" the child got a couple of hot baths. Sylvester and Marshall Hall's treatment were both tried, till, from a combination of all these remedies, the infant was breathing regularly at the rate of 15 per minute, after *being inflated for nearly four hours*. Dr. Marshall not leaving till five o'clock, about half an hour before which time the first drop of blood from the funis tinged the water of the hot bath, in which the child was kept during its convalescence. Out of all the methods of resuscitation employed in this case, the breathing in and expulsion of warm air had certainly the most beneficial effect on the infant, especially when the mouth-to-mouth breathing was combined with the raising and depressing the arms.—*Medical Press and Circular*, Mar. 26, 1873.

ERGOTIN : its Hypodermic Use in Uterine Fibroids and Hæmoptysis.

In a summary of the transactions of the College of Physicians of Philadelphia, published in the *American Journal of the Medical Sciences* for July, 1873, occurs the following report in the action of this agent, a report interesting alike as exhibiting the physiological action of the remedy, and as promising practical results.

Dr. Keating, in answer to some inquiries from various sources, communicated to the college his experience of the hypodermic administration of ergotin in submucous uterine fibroids, as suggested by Prof. Hildebrand, of Königsberg. Although it might be premature, as yet, to speak of experiments which were not completed, yet there were certain results he had already obtained, which he deemed eminently useful and practical.

In one case of uterine submucous fibroid, after the sixteenth hypodermic injection, the uterine tumor had been reduced, by measurement, to one-third of its size, had been forced down upon the cervix uteri, and was evidently endeavoring to force itself through the os uteri. Dr. Keating was prepared to assist its spontaneous enucleation by making a slight opening in its investing membrane, which was tense and unyielding, but was forced to desist for the present from the impaired health of the patient, suffering from a complication of a serious anæmia consequent upon frequent and prolonged hemorrhage and an acute attack of the prevailing influenza. Superadded to this state of things was an annoying irritability of stomach and prostration, apparently to some degree the results of the constitutional effects of the ergotin.

In the above case, the sixteen hypodermic injections (of the following strength; ergotin gr. xlv; glycerin, aq. destil., *aa m* cv. Syringeful, or about twenty drops administered each time) were injected consecutively within the space of eighteen days. They were all applied over the abdomen below the umbilicus.

Their application was always attended with excessive pain, the patient suffering for near an hour after the injection. With all this intense irritation caused by the introduction of the drug and the proximity of the injections to each other, Dr. K. was astonished to find that only one seat of the injections showed the slightest tendency to inflammation or formation of an abscess; this one spot caused the patient great pain for several days, and from its hard aspect, diffused inflammation, and hardened base, gave her attendant great uneasiness. Upon careful examination it was discovered that this injection was decidedly the most superficial; bearing this in mind all the others were made as deep seated as possible, and although the same intense burning pain followed each application, in not one instance was there even a threatening of an abscess. In considering this point, naturally Dr. K. conceived the impression that the more deep seated the injection, and the more the cellular tissue was avoided, the less tendency there might be to subsequent inflammation and formation of an abscess as sequelæ of hypodermic injections. He would beg leave to make this digression, while on this point, and state that his subsequent experience with hypodermic injections in other cases, and with other drugs, have led him to believe that there were ample grounds for confirming his views on that point, and he would suggest its application in cases where such complications threaten.

In the first hypodermic injection the pulse, which was 76, increased fifteen minutes after to 90. Respirations also increased about 4. On the second day the pulse was, before the injection, 73, thermometer $98\frac{1}{2}$ degrees. In each succeeding injection the pulse fell, as also the temperature, until finally, at the fifteenth injection, the pulse stood at 56, respiration about 12, and the temperature remained at 96 degrees. Subsequent to the sixth hypodermic injection, at the expiration of ten minutes, a violent constriction would take place around the heart, lasting about two hours, very annoying and alarming to the patient; sounds of heart very weak, labored action, continued coldness of the extremities, with numbness. At the end of the twelfth injection a well defined chill came on every day, loss of appetite and a nausea which finally became so excessive as to cause all food to be rejected, and to reduce the patient, previously exhausted by anæmia and influenza, to such a degree, as to force the suspension of further treatment. During the administration of the ergot there was a constant pressure of the tumor on the sacral nerves and on the bladder, and the patient herself fully realized her diminution in size and the descent of the tumor. The nausea and irritability of the stomach continued for some days after the cessation of the employment of the hypodermics, and as the introduction of the finger in the tense cervix uteri would at any moment produce an increased irritability of the stomach, it be-

came evident that some of the abnormal condition of the latter organ was due to the engorging and consequent pressure of a portion of the tumor within the os uteri, a view which was confirmed by the immediate relief consequent upon suppositories of opium and belladonna inserted in the rectum. Since the discontinuance of the treatment and relief of the catarrhal and anæmic condition of the patient, all internal symptoms have disappeared, and she herself is anxious for a renewal of treatment. Within a week of the discontinuance of the hypodermic a menstrual period supervened with excessive hemorrhagia; two hypodermic injections were administered with the same proportions of ergotin, which seemed in a few hours to exercise a complete control over the flow.

Dr. K. could not hesitate in announcing a confirmation of Prof. Hildebrand's results in the above case. Notwithstanding the partial application of the treatment, the unfavorable circumstances in the broken down condition of the patient when it was employed, he could but trust that in the reduction of the tumor, the control of the hemorrhage, and the remarkable tolerance of the drug under the circumstances, there were conditions which foreshadowed the most important and the happiest results from the new method of treatment in a class of cases which hitherto had been the opprobrium of gynecologists. We are on the eve of deriving the most important results from the employment of a drug, the nature of which has been almost entirely confined to midwifery. Dr. K. had derived the most happy results from its employment in hæmoptysis, rarely having recourse to any other remedy in such cases than the hypodermic injection of ergotin. In two cases of vicarious hemorrhage of the lungs he had immediate relief from the use of the ergotin, and, combining with its employment the local action of the galvanic current, had succeeded in bringing on the natural menstruation; in one case after a suspension of four years, in another after one year of constant irregularities.

Dr. K. would take some other occasion of giving to the College his results from the hypodermic employment of ergotin, and also its internal use in cases of chronic engorgement of the os and cervix uteri, of hypertrophy, or from subinvolution of the uterus, and in cases of chronic flexions of the uterus of years' standing, where, with the employment of ergotin and local application of galvanism, he had effected perfect cures, enabling patient to dispense with the use of pessaries, which at best are necessary evils.

In reply to a question of Dr. John Ashhurst, Jr., Dr. Keating stated that the needle was introduced at the border of the linea alba, and the point carried down to the muscular structures. In this way he was of the opinion he avoided the tendency to inflammation, which exists when the needle is merely passed into the cellular tissue."

OPERATION FOR STRABISMUS.

Dr. Snellen latterly has adopted the following method of operating for strabismus: The conjunctiva is freely divided in a direction parallel to and directly over the muscle; thus in convergent strabismus the incision would extend from the edge of the cornea towards the caruncle. Wounds in the conjunctiva parallel to the margin of the cornea are inclined to gape, especially when the eye is turned in the opposite direction; wounds vertical to the margin of the cornea are, on the contrary, inclined to close when the eye is rotated in the opposite direction. If necessary, a suture can be applied without any fear of diminishing the effect of the operation. The operator next holds with forceps first one lip and then the other of the wound, and separates with blunt-pointed scissors the conjunctiva to an equal extent above and below. The caruncle is then held and treated in the same way. The closed forceps are placed between the edges of the wound on the middle of the muscle, opened, then gently pressed down and closed, thus inevitably seizing the muscle, into which a small aperture is now made close to the sclera. Two exactly equal incisions can now be made by inserting one blade of the scissors through the opening and the other between the muscle and the conjunctiva.

The advantages assigned are the following:

1. The operation is easier. There is no risk of wounding the sclera (hence sharp-pointed scissors may be used so as to separate the attachment nearer to the globe). There is no danger of dividing Tenon's capsule too far in any direction.
2. The operation is less painful.
3. Extravasation of blood under the conjunctiva is prevented.
4. When desired, the capsule can be divided to a greater extent on one side so as to alter the action of the muscle.

A somewhat similar operation is proposed by Dr. Snellen for paralysis of the ocular muscles. "The conjunctival wound is in the direction of a meridian (from before backwards). The muscle is divided in the usual way, but a little further back than in tenotomy, so that a small piece of it remains attached to the sclera. Two sutures are now applied in the following way: Through the upper edge of the wound in the conjunctiva, through the remnant of the tendon on the sclerotica, through the muscle drawn forwards, and again through the same edge of the wound in the conjunctiva. The second suture is inserted at the lower side exactly in the same way and parallel to the first. Both are now separately drawn tight and knotted. So made, they cannot possibly become loose too early. As the knots are on the outer side of the conjunctiva, the threads can be easily removed at any later period.

The risk of inflammation may be lessened by separately uniting the conjunctival wound. It is not always necessary to divide the antagonist."—*Royal London Ophthal. Hos. Rep.*, Feb. 1873.

MEDICAL GLEANINGS.

TYPHOID FEVER FROM INFECTED MILK.—A recent outbreak of typhoid fever has occurred in London, in the parishes of Marylebone and St. George's, Hanover Square, very remarkable in its history and limitation. The number of cases is not exactly known, but amounts to several hundred. The families attacked belong, with hardly an exception, to the wealthier classes, and among them are those of wellknown physicians and surgeons. The outbreak occurred in the third week of July, and the family of Dr. Murchison was among the earliest attacked. The doctor first directed his attention to the milk supply, and after an extensive examination it was discovered that the source of the poison was in one of the eight farms which supplied the milk consumed by the stricken families. Here not only were cases of typhoid fever in existence, but the water used for dairy purposes was contaminated with excremental and other matters.—*The Practitioner*, Sept.

THE BEST FORM FOR ADMINISTERING THE PHOSPHATES.—The great value of the phosphates as therapeutic agents in certain kinds of diseases has led Coirre to inquire into the best way of employing them, and especially one of the most valuable, the phosphate of lime. In order that this remedy may be readily taken up by the system, he recommends that it be given in doses of 10 grs. dissolved in 3ss of water, to which a few drops of hydrochloric acid has been added. This latter represents the free acid of the gastric juice. It aids in the absorption of the phosphate, and is of itself useful, as in small doses it promotes digestion. Its use is indicated in diseases which cause disturbance of the digestive and nervous system, such as chronic purulent discharges, chlorosis, tuberculosis, (where calcification of tubercles may be desirable), and similar affections, in the osteomalacia of pregnant and nursing women, where the phosphate of lime is collected in the blood of the mother for the benefit of the child, but to her own serious detriment.—*Presse Med.*, *Schmidt's Jahrb.*, 4, 1873.

PROGRESSIVE MYOPIA AND ITS OPERATIVE CURE.—Richard H. Derby, M. D., of New York (*N. Y. Med. Journal*) reports several cases of this affection and shows evidence in favor of tenotomy in this class of cases. He calls the attention of the profession to the importance of muscular insufficiency as a cause of pro-

gressive myopia, a fact first established by Von Graefe, and rightly regarded as one of his most brilliant contributions to ophthalmic literature.

As a rule, tenotomy is to be performed on that eye which first deviates outward on approaching the fixation object, or it is to be performed on the eye with the strongest facultative divergence, or on the one with the worst acuteness of vision. Immediately after the operation, the effect must be controlled by means of the equilibrium test, made in what is called the "position of election."

The operated eye is to be bandaged, in order that as far as possible no movement of the eye shall modify the immediate effect. If it has been used, the patient must be seen within six or eight hours after the operation, and the equilibrium test made in the position of election.

PASSAGE OF MANY PINS, ETC., PER ANUM.—James L. Fite, of Lebanon, Tenn., (*Nashville Jour. Med. and Surg.*, June, 1873), reports the case of a child, three months old, who passed per anum without difficulty, within two days, twenty-eight pins, two needles, and an agate button. So far as he could discover the baby never had a pain from the effects of the pins, etc. It was thought that they were given to the baby by a little servant girl on the morning of the day the first pins came away.

A CASE OF PRECOCIOUS MENSTRUATION.—R. K. Clark, M. D. (*Boston Med. and Surg. Jour.*) writes that a girl, aged 6 years, has menstruated regularly once in twenty-eight days since September last. She is not precocious in an other respect, not large of her age; but the usual change in form suited to a young lady 15 or 16 years of age has taken place, so that she looks like a little woman. An aunt of the child became regularly menstrual at six years of age, and continued till she was thirty-eight.

EXCISION OF THE HIP-JOINT.—G. Troup Maxwell, M. D. (*Phila. Med. Times*) records a successful case of excision of the hip joint. The patient, male, aged 35, had labored under coxalgia, or tuberculosis of his right hip joint, eighteen years. He has now a comparatively useful limb, shortened slightly, but with a little motion in the joint, and fitting him for employment in many vocations.

CASE OF RUPTURE OF THE IRIS.—Dr. Geo. H. Powers (*Western Lan et*) relates a case of rupture or coloboma, of the iris, in a female patient, aged 15, caused by the shock of a blow upon the lid, unaccompanied by any wound or abrasion of the external tunics of the eye, or by internal hemorrhage, or by permanent luxation of the lens, or thus far by cataract. The iris is so far restored in its contractility, that the pupil is very little, if any, larger than that of the other eye, but its displacement downwards

causes double images to some extent. Vision is still improving in clearness, and the patient can read large letters. Dr. Powers has never seen a similar case, and does not remember one where the injuries were not much greater than in this instance.

CINCINNATI HOSPITAL.

The clinical lectures in the Cincinnati Hospital commenced Oct. 6. The following are the preliminary remarks of Dr. M. B. Wright, Chief of Staff:

GENTLEMEN—Dr. Thornton, who is now present, will commence the series of lectures which are to be delivered in this institution during the ensuing winter. I have asked him to delay his remarks a few moments, and I ask your indulgence while I offer a brief reply to an assault on the Cincinnati Hospital by the Dean of the Faculty of the Medical College of Ohio. It consists of the following language:

"The charge has been entered against the college that its students were sent to the Cincinnati Hospital. The speaker could assure his audience that this charge did not lie against the Faculty, as they had always given the students the option of attending the lectures in that institution."

This language is untrue to the facts, and in its structure grossly deceptive. When I first read it in the *Enquirer*, the semi-official organ of the Faculty, the question presenting itself was, Is not the pen of the reporter at fault? But when it appeared in the *Clinic*, the acknowledged organ of the Faculty, there was no longer room for doubt. Then came astonishment and pity for human weakness. Let me give you the facts:

Three years ago a portion of the Faculty of the Medical College of Ohio were members of this staff. From the foundation of the hospital up to that time the lecturing hours of the colleges were so arranged as not to interfere with the clinical hours in the hospital. Indeed, the hours now occupied in delivering lectures here seem fixed by agreement with the colleges, the Faculty of the Medical College of Ohio being a party to the contract. Those hours are now occupied by the Faculty in didactic teaching, and thus are students prevented, and purposely prevented, from attending hospital clinics. The language of the Dean, therefore, is only an example of that specious pleading for which my friend is so distinguished. Suppose a man were to approach you, pleading for the bread of life, and, instead of at once appeasing his hunger, you chain him to a stake and place food beyond his reach—would this justify you in going about boasting of your goodness to the starving?

This is a plain illustration of the course of the Dean in recommending his students to attend clinical lectures. He tells them that if they desire to attend lectures at the Cincinnati Hospital they can do so; but, at the same time, they are given to understand that lectures will be given in the College at the same hours, and if the latter lectures are neglected, woe betide them in the day of final account. Oh! mockery of truth and justice! will the blush never come to thy cheek!

Another quotation: "He was equally satisfied that under the present organization of the hospital the fault did not lie with the students."

This insinuation is less manly than a direct charge. He has forced

a comparison, and you shall have it. I know the Dean and his colleagues from head to heel. Some are professors through my influence—all by my vote. I have not a word to say against their attainments, industry, or lecturing abilities; but it will be admitted that they could attend to their duties just as well if they were less engaged in gossiping about the supposed faults of their neighbors.

This staff is also well known. I have no disposition to bestow praise upon them individually. It must be said, however, that the entire staff is fully able to satisfy all the requirements of the hospital.

To gratify a well known vanity it may be admitted that the staff of the Samaritan Hospital—the Dean and his colleagues—is equal in practical ability to the staff of the Cincinnati Hospital. But in professional morals the latter is decidedly superior. Individuals belonging to the staff of the Samaritan Hospital avail themselves of every opportunity to assail with vituperation the general government of the hospital or its medical attendants. Charges are made through newspapers, over anonymous signatures, introductory lectures are distorted into floodgates of slander, and vacant spaces in the *Clinic* are filled with malignant inuendoes. On the other hand, I am proud to declare that I have never heard a member of this staff utter a single sentence against the Samaritan Hospital in any of its relations or appointments. They attend to their own business, wishing prosperity to all our public institutions.

There is another feature in the selfishness of the Dean and his associates constituting the staff of the Samaritan Hospital, which is strangely inconsistent. They refuse all other faculties a participation in their hospital work. And yet they are constantly crying out to the Trustees of this hospital, "Let us in, let us in. In the name of God and humanity, hasten and let us in."

At the same time these appeals are being made, they are assailing them with all manner of abuse. Is it the custom of the mendicant while extending one hand for alms, to strike heavy blows with the other?

Another quotation: "The Hospital Trustees had expelled the Faculty of the college from its staff." Will the Dean, with his knowledge of the facts, repeat that sentence? I have too much confidence in his integrity and outspoken manner to believe it. There has been but one member of the Faculty expelled from the hospital by the Board of Trustees. If the Dean will examine the record he will find that he expelled himself.

Still another: "Moreover they had removed all professors of medical colleges in the city, and in this way deprived the hospital of the services of some of the most eminent physicians in the city, *to the injury of the sick*, as well as to that other purpose for which the hospital was erected." The italicising is my own.

It is the duty of the Hospital Trustees to look exclusively to the good of the institution, without direct reference to any other institution. Experience had satisfied them that they could not, should not, in these days of professional enterprise, bestow hospital advantages on any one college to the exclusion of all the rest. To favor all, as was their effort, was simply to perpetuate strife among the colleges for hospital supremacy. The Trustees, therefore, deemed it wise to separate the hospital from the colleges, that all strife might be terminated, except such as pertained to the welfare of the hospital.

If the Dean will light another cigar and stretch himself leisurely in

his intellectual chair, he may be reminded that he bestowed loud sounding praise upon the Trustees for the long desired action. He may be brought to a vivid remembrance of his arguments, conclusively showing the immense good that would result to both colleges and hospital by their separation.

"To the injury of the sick" is an inconsiderate expression which no one could make except an old bachelor in his more lonely and crabbed moments. The charge, however, needs attention. My first connection with the hospital dates back thirty years. During all the long interval I have been an attentive observer of its medical management, and it is my candid opinion that the sick have never been more kindly, faithfully, or successfully treated than at the present time. The staff has gone on in its every-day duty regardless of the demonstrations which jealousy and envy and hate have been constantly hurling at its individual members.

We will expect that the Dean, on introductory occasions, will utter the stereotyped expression that "the organization of the college was never stronger than at present," but we have never supposed that he would be put to the necessity of sustaining this declaration by an effort to depreciate the character of others. It is a fearful lesson to present to students. Professional honor and individual interests demand that it should be cast aside as unworthy your acceptance. Some of you, after having gained the doctorate, may engage in practice side by side. Will it be your aim to secure the confidence and patronage of the people by decrying each other? Not if you are deserving and have the hearts of honest men.

At last the Dean spoke, "To the injury of that other purpose for which the hospital was erected—medical instruction." How smoothly amiable does he terminate his closest concocted vamping. It would be a happy pastime for the gentleman if he would turn his thoughts to the fact that the hospital is a great public charity, sustained by the people, and is not designed for gladiatorial exhibitions—medical or otherwise. Medical instruction, proper as it may be, is to the Trustees a subject of secondary consideration.

Whether the cool, deliberate, unprovoked assault upon the staff be just or unjust you will now have an opportunity to determine. Hold me responsible for the declaration that if you will be half as mindful of your duty to them as they will be mindful of your interests, you will have no cause to regret your presence here.

These remarks have been made without consultation with my col-

obligations for its appearance, for I presumed that it appeared in the advertizing columns of that paper by order of Dr. Palmer, in the way of discharging certain obligations which that gentleman owed me. Very much to my surprise, Dr. Stevens, the editor of the *Lancet and Observer*, now holds me responsible for the advertisement, and Dr. Palmer has not come up as he should and cancelled it. This is not as it should be; for the manner in which the advertisement was written did not properly represent my business, and in that respect was an injury. In time to come I propose to attend to my own business, and do not wish the interference of meddlesome doctors who propose to discharge their obligations to me by inserting my advertisement in medical journals in their own way, and then leave me to pay for them.

ERNST ZEUSCHNER.

October, 1873.

Book Notices.

A MANUAL OF MEDICAL JURISPRUDENCE, by ALFRED SWAINE TAYLOR, M. D., F. R. S. Seventh American Edition. Revised from the author's latest notes, and edited with additional notes and references by JOHN J. REESE, M. D., Prof. of Medical Jurisprudence and Toxicology in the University of Pennsylvania. With illustrations on wood. 8vo. Pp. 879. Philadelphia: H. C. Lea. Cincinnati: R. Clarke & Co.

Taylor's Medical Jurisprudence has been before the profession for a long time, and has received its hearty endorsement. We suppose that no better work on the subject exists in the English language. This edition is the seventh American and eighth English, which is speaking in the highest terms that can be spoken.

A number of changes have been made in this edition which are improvements. For the information and guidance of medical men, two chapters on evidence and the duties and responsibilities of medical witnesses have been placed at the commencement of the volume, and some medico-legal subjects, not hitherto treated in the previous editions, have been introduced. Among other changes may be noticed the introduction of numerous engravings representing the crystalline forms of poisons, and the apparatus used for their detection.

Rev. Dr. GUTHRIE, of Princeton, eminent for their writings, who hold the view that the brain is only the organ of the mind, which they regard as the soul, will have to contend vigorously to stay them. As facts become developed by physiology and pathology, the evidence seems to become stronger that mental phenomena are the result of cerebral molecular changes -- that thought is the result of changes or movements in the cells of the cortex.

But while thinking may be but mere physical phenomena, as physiology would demonstrate, yet that is no evidence but that some other principle may be the immortal principle--the principle, if we may so term it, that will live forever. Some time ago we were reading a learned article in an English quarterly, in which it was suggested that *Consciousness* might be the soul. But, however that may be, it is the duty of science to search and bring forth facts without regard to consequences--to preconceived notions. "Truth must prevail though the heavens fall," is an old saying and a true one.

Mr. MORELL, in his *History of Modern Philosophy*, thus disposes of materialists:--"Does he really do nothing but observe facts? And, if he were confined to this, could he ever boast a single scientific truth? No, so far from that, the moment he commences as a physiologist to investigate the functions of the animal frame, he shows that he is acting upon an *a priori principle*, a principle not derived from observation, but one upon which, in fact, the validity of all observation rests. There is a conviction in his mind prior to all actual research, that every organ which may be laid bare by the scalpel, performs a certain function, and has a final cause. Were the anatomist neglecting this, merely to record *what he sees*, and to put down facts in their isolation, physiology as a *science* could never exist. The band which unites his facts into a veritable branch of science, are certain fundamental axioms, whose office it is to show the casual connection which these facts have with each other. . . . There is neither an organ nor a function, which he observes, respecting which he does not profess a certainty that it has a cause and an end, even though both should be completely unknown; and upon this conviction he does not hesitate to proceed onwards in his research until they both shall be discovered."

PROF. C. A. STUNTZ, Professor of Chemistry in the *Cincinnati College of Medicine and Surgery*, has recently been appointed to the Chair of Chemistry in McMICKEN UNIVERSITY. No higher acknowledgment could be made of Prof. Stuntz' scientific ability; for it has been the determination of the Trustees of this munificent University fund that the University should be second to none in the whole country, and that therefore none but teachers of the highest eminence should be engaged. This appointment will not interfere with Prof. Stuntz' connection with the Cincinnati College of Medicine and Surgery. At this time he is engaged in giving instruction regularly in each institution.

We take the following from the *Wheeling Intelligencer* of Aug. 27:

VACANCY FILLED.—The Board of Physicians of the Children's Home, of which the late Dr. CUMMINS was a member, have appointed Dr. J. C. HUPP to fill the vacancy occasioned by Dr. Cummins' death. The directors of the Home have notified Dr. HUPP that they "heartily approve" the selection, and request his acceptance; and the Doctor has accepted accordingly. The Board is composed of four physicians chosen from the oldest practitioners in the city, who give their services gratuitously.

SPECIALTIES. — Dr. Robert Barnes says:—"I have recently been honored by a visit from a lady of typical modern intelligence, who

consulted me about a fibroid tumor of the uterus; and, lest I should stray beyond my business, she was careful to tell me that Dr. Brown-Sequard had charge of her nervous system; that Dr. Williams attended to her lungs; that her abdominal organs were intrusted to Sir William Gull; that Mr. Spencer Wells looked after her rectum; and that Dr. Walshe had her heart. If some adventurous doctor should determine to start a new specialty, and open an institution for the treatment of disease of the umbilicus—the only region which, as my colleague Mr. Simon says, is unappropriated—I think I can promise him more than one patient.”

DOCTORS ON A STRIKE.—We have often thought that the district physicians of Cincinnati, who receive but \$25 a month for attending to all the poor of their respective districts—in some districts averaging about ten cents a visit—should “strike” for higher wages, but never having heard of a precedent we were not disposed to suggest it. But we have an example given us now by the *Gazette Hebdomadaire*, which relates an account of a “strike” of medical practitioners of the county of Argau, Switzerland, in consequence of the miserably small fees allowed them for visiting the poor. It appears that a physician is entitled to about fifteen cents for visits at a distance of nearly a mile.

INTRODUCTORY LECTURE.—We hope our readers will not omit reading the introductory remarks of Dr. M. B. WRIGHT, to the clinical course of Lectures just commenced in the Cincinnati Hospital for the ensuing season, printed on another page. They exhibit professional hypocrisy and lying in a manner they deserve.

THE POPULAR SCIENCE MONTHLY for October is on our table, and has the following contents:

Silk-worms and Sericulture, by Prof. A. de Quatrefages (illustrated); Mental Science and Sociology, by Herbert Spencer; A National University, by President Eliot; Agassiz and Darwinism, by John Fiske; The Primary Concepts of Modern Physical Science, by J. B. Stallo; Finding the Way at Sea, by R. A. Proctor; Secular Prophecy; Sympathetic Vibrations in Machinery, by Prof. J. Lovering; Speculation in Science, by Prof. J. Lawrence Smith; The Glaciers and their Investigators, by Prof. John Tyndall; Proctor on the Moon (Frontispiece-Illustration); Editor's Table. Literary Notices. Miscellany. Notes.

Published by D. Appleton & Co. Price \$5 per annum. It is a magazine of the very highest order.

ROBERT CLARKE & Co. have just issued a Physician's Pocket Case-Record and Prescription Blankbook. It is on the plan of the ordinary receipt book, *i. e.*, each leaf contains a couple of blanks—one for the prescription to be given to the patient, and the other for a copy which is left in the book as a “stub.” On the back of the latter are lines for date, name, age, and clinical record.

We think it will be considered as very desirable.

ATLANTIC & GREAT WESTERN R. R.—Our readers should notice the advertisement of this road. This is a favorite Eastern route, and commends itself for a variety of reasons. It passes through a splendid country and through the most thriving towns of Central Ohio, the Western Reserve, and Northwestern Pennsylvania. Besides, it is the only line which runs its day coaches from Cincinnati to New York without change. A large portion of the line has been recently re-laid with steel rail, which insures unusual smoothness of running.

THE CINCINNATI MEDICAL NEWS.

VOL. II

CINCINNATI, NOVEMBER, 1873.

No. 11.

WHOOPING-COUGH AS A CAUSE OF SPINAL CARIES.

By BENJAMIN LEE, A. M., M. D., of Philadelphia.

The fact that whooping-cough is occasionally a direct cause of inflammatory and subsequent ulcerative action in the spinal column appears to be entirely overlooked by systematic writers on surgery, and indeed to have escaped the notice of many who have devoted especial attention to the study of affections of this nature.

This is probably to be accounted for somewhat as follows: The general practitioner usually enters upon his career thoroughly imbued with the orthodox doctrine that Pott's disease is of strumous origin, essentially consisting in a deposit of tubercle in the body of one or more vertebræ. Hence he is on the lookout for no extrinsic cause, and does not feel the necessity of carefully examining the past history of the case. The orthopedist, on the other hand, does not see the case until deformity has taken place, many months after the reception of the injury which has induced the ulcerative inflammation, and the child's parents will not mention the fact of the occurrence, so long before, of a disease which they themselves in no way connect with its present condition. However we may explain it, the truth remains that this connection of cause and effect between the above-mentioned affections is not yet taught in our text-books. Such being the case, it is not to be wondered at that the family physician, having, in many years of practice, numerous cases of the one, and perchance none whatever of the other, should fail to appreciate and recognize this sequela when it happens to occur under his immediate observation. The

following cases will, I trust, amply substantiate, in the minds of members, the truth of the theory advanced.

CASE I.—E. P., native of Pittsburg, Pa., parents both living and in good health; æt. 10 years; is very fair, has flaxen hair and blue eyes. Has always been rather a delicate child, but has had no serious illness except diphtheria at the age of three years, from which she recovered perfectly. About a year ago, however, she was attacked with whooping-cough, from which she suffered very severely. On recovery from this attack, she was observed to stoop much more than had been her habit, and soon afterwards to lean somewhat towards the left in standing and walking. She was brought to me Jan. 29, 1867. Her condition at that time was as follows: The spinal column deflected suddenly to the left from the sixth dorsal vertebra upwards; the deviation being angular in its character, but without posterior projection. There was no secondary or compensating curve above or below. The spinous process of the first dorsal vertebra was displaced to the right about half an inch. The supra-scapular muscles on the right side were much relaxed, allowing the scapula to slide down the back at least an inch lower than that of the opposite side, and giving an appearance of greatly increased deformity—causing an apparent projection of that shoulder, which rendered the similarity to a lateral curvature very striking. The right leg was a quarter of an inch shorter than the left, and the toes of the foot were directed inwards. She was very easily fatigued. Her sleep was disturbed, her appetite variable, and her temper irritable. Having had occasion, a short time before, to witness an excessive aggravation of a case of already existing spinal caries, in consequence of the intercurrent of whooping-cough, and being able to trace the present incipient deformity to no antecedent injury, I felt that I was justified, in view of the sequence of the diseased conditions and symptoms, in concluding that the one had been actually developed by the other, and, but for it, might never have occurred. I applied a spinal splint, so adjusted as to give support at the point of angular deviation, and prescribed a course of “movements” or exercises especially designed to develop the dorsal muscles of the right side, more particularly the *levator anguli scapulæ* and the *rhomboidei*. Under this mode of treatment I was gratified to see a steady and progressive, though

not rapid improvement, which terminated in complete recovery, and in so doing convinced me of the accuracy of my diagnosis.

CASE II.—This little patient was sent me by Dr. Wm. Corson, of Norristown, Pa., on the 18th of May, 1867. Her parents were both in vigorous health, and gave no history of family predisposition to disease of a strumous nature. The child was very tall of her age, and had grown rapidly for the past two years. She was then nearly seven years old. Her general health had never been good. She has been subject to ephemeral febrile attacks, and when feverish, was inclined to stupor. Rather more than a year ago she was seized with whooping-cough. The attack lasted five months, and was of exceptional severity. She had not fairly recovered from it when her mother observed that she did not hold herself as erect as formerly, and was awkward and stiff in her walk and movements. About two months ago, she discovered a slight projection of the lower part of the spine, which has steadily but slowly increased up to the present time. Her condition at the time of my first examination was as follows: The first, second and third lumbar spines formed a slight projecting curvature posteriorly. The three vertebræ immediately above receded correspondingly. The first lumbar vertebra was deflected considerably to the right; the second about as much to the left; while the third was back in the right line again. This curious deformity gave almost the effect to the eye of a dislocation. Her appetite was small and capricious. She slept well and complained of no pain, but avoided all movements which tended to produce concussion of the bodies of the vertebræ. She was able to bend forward to a limited extent, but in doing so did not succeed in altering in the least the curve of the suspected portion of the spine.

In this case, as in the previous one, a purely mechanical treatment was soon followed by an improvement in the general health as well as in the direction of the spine, and her growth has continued uninterrupted. As recently, however, as this spring, she has shown a tendency to droop one shoulder and to lean considerably to one side, indicating a condition of debility of the spinal muscles confined to one side, but without rotation of the vertebre.

CASE III.—B. V., æt. 4 years, the son of one of our missionary bishops in the far west, was brought to me by his parents

on the 13th of December last. The history was as follows: He had enjoyed excellent health up to about a year previous, when he was seized with whooping-cough. The disease was extremely severe, the paroxysms of cough frequent and violent, and the duration protracted. Digestion was interfered with rather more than usual. As he recovered from the cough he evinced an unnatural irritability of temper, failed to regain a healthy appetite, continued somewhat emaciated, was very restless at night, and preserved a peculiar rigid carriage and gait, entirely different from his former mode of progression. The disturbance of the digestive functions continued in spite of every effort; a serious diarrhea set in, which before long assumed the form of lientery, many articles of food passing entirely undigested. This necessitated a very circumscribed dietary. To the diarrhea were soon superadded excruciating paroxysms of gastralgia, especially resulting from sudden shock or fatigue. The family physician had given the case a very careful examination a few weeks before I saw it, and, owing to the awkwardness in the child's walk, had looked at the spine at the father's request, but *finding no tenderness upon pressure* (that false, misleading light of our text-books) had pronounced the spine healthy. At the time of my examination, his manner of walking was so characteristic of the initial stage of spinal arthrochondritis, during which the intervertebral disks and the articular surfaces of the vertebæ are exquisitely sensitive to every sudden increase of pressure from the weight of the superjacent trunk and head, and every muscle, which can possibly contribute to maintain the spine rigid and distribute shock, is brought into an almost tetanic tension—his whole aspect, I say, was so characteristic, that I had but to see him enter the room to make up my mind as to the nature of his trouble. On inspecting the spine, a slight projection of the fourth dorsal vertebra was noticed, together with a bulging posteriorly of the lower dorsal and upper lumbar tract. The toes were inverted in walking. He could walk but a very short distance without being compelled to rest. All the general symptoms described above existed in an aggravated degree. The nature of the disease was explained to the mother, who was enjoined to keep him the greater part of the time on the bed, while his instrument and apparatus were being constructed. No medica-

tion was advised. A week later he was brought back to have the splint applied, with a report of the most remarkable improvement in all his symptoms as a result of simple rest and the recumbent posture. His appetite had returned, the diarrhea had ceased, food was perfectly digested, his irritability of temper had notably diminished, he slept more quietly, and his gastralgia was less intense and less frequent. No more complete vindication of the diagnosis could have been afforded or any clearer indication for treatment. The existence of the inflammatory action at two different points in the spine made it extremely difficult to adjust an instrument satisfactorily, so that suspension was relied on to a greater extent than usual in the management of the case. Notwithstanding a progressive improvement in all the general symptoms, a very decided deviation of the spine to the left in the lumbar region has taken place. This distortion appears to be in part dependent upon a contraction of the psoas muscle on that side, producing slight shortening of the limb and obliquity of the pelvis, but there is evidently irregular muscular action in some of the dorsal muscles as well.

CASE IV. is that of a little boy, three years old, whose parents are both living and in robust health, and who was himself perfectly well up to the early part of the past winter, when he was attacked with whooping-cough. The attack had not entirely passed off when he began to suffer from gastralgic paroxysms. These were soon followed by morning rigidity, stiffness and awkwardness of gait, and drooping of one shoulder, with every prospect of speedy deformity.

CASE V. I saw by the kindness of my friend, Dr. Sayre, of New York, a week since, at his office. The little girl was brought by her mother to be treated for clubfoot; but Dr. Sayre very wisely refused to interfere in the case in its present condition. The parents were both living and healthy. They resided in Titusville, in this State, but, attracted by the flaming advertisements which are strewn in profusion all over the land by the proprietors of an "institution" in Indianapolis, they took the child there, and were furnished with a brace which, never very efficient, was now outgrown and entirely useless, even injurious. She was suffering, when I saw her, from chronic meningitis of both the brain and the spinal cord. There was almost complete

paralysis of the lower extremities, with want of control over the little muscular power that still remained. The feet were held with considerable firmness in the position of *vasoequinus*, but could be brought into the natural position by firm, gentle pressure. The movements of the upper extremities were only partially under control. There was strabismus, and speech was very indistinct. The functions of the mind appeared to be somewhat impaired. There was paralysis of the muscles on the right side of the neck, with contraction of the sterno-cleido-mastoid and others on the left side, drawing the head down. The child was anæmic to a degree, bled at the nose on the least provocation, and appeared excessively feeble. At about the sixth dorsal vertebra, the spine began to deviate abruptly and at a sharp angle to the right. There was very little prominence at this point, but higher up the scapula was forced out, giving much the aspect of a lateral curvature. Dr. Sayre agreed with me, however, that there was no rotation of the vertebræ, and it could not, therefore, be so classified. The curve extended from the mid-dorsal region, as before stated, to the base of the skull. There was no compensating curve in the lumbar region, another reason for rejecting the idea of its being true lateral curvature. The history given by the mother was briefly, that, having up to that time enjoyed perfect health, the child was, about two and a half years before, seized with whooping-cough, with which she was very sick. As she began to be relieved of the cough, however, she began also to complain of severe pain with loss of power in the lower extremities. Before many months the spine was noticeably deformed, and locomotion difficult. The inflammation rapidly extended from the intervertebral disks and bodies of the vertebræ to the spinal meninges, and later to those of the brain. The progress of the curvature has been regular and at times rapid, the instrument which was applied being intended for a lateral curvature, and therefore failing of giving proper support or resistance to the deforming action.

It cannot have escaped the notice of any who have been kind enough to give their attention to this somewhat tedious detail of cases, that there are certain strongly-marked features running through all of them. All present the history of a previously healthy child, or one at least presenting no indications of stru-

mous diathesis, and whose parents were in good health, being attacked with symptoms of spinal inflammation shortly after an attack (unusually severe) of whooping-cough. No other cause could be assigned for the development of the spinal affection, in the way of external injury. The progress of the case was steadily towards deformity, and that deformity in every case, while evidently dependent upon inflammatory ulceration and loss of substance, had a strong tendency to assume a lateral direction. Although strictly angular in its character, it did not present any very considerable posterior projection, some influence evidently being at work to draw the spine toward one side. In two of the instances this lateral deviation was so abrupt as almost to appear like a dislocation. The inference is to my mind irresistible that there is in these cases more than a coincidence; that we have here a peculiar type of spinal deformity resulting from inflammation produced by the violent succussion of the intervertebral disks from muscular contraction in the terrible spasmodic cough of pertussis, aided, it may well be, by a dyscrasia resulting from the combined action of the poison of the disease upon the blood and the deterioration of that fluid in consequence of the impairment of nutrition, due to the constant rejection of food which is so constant a feature of the disease.

Two practical lessons attach themselves to this view. The first, the importance of carefully watching the convalescence of every case of whooping-cough, and taking warning on the very first appearance of any symptom indicating an implication of the spine. The second rather, perhaps, a suggestion: Whether something might not be done during the progress of a severe case of this disease, to protect the spine from shock. We all know how instinctively and anxiously the little sufferer seeks anterior support the moment it feels a paroxysm of cough coming on. May we not take a hint from this natural desire, and by applying some simple form of support to the spine, at once give relief to present distress, and ward off impending danger?

PHILADELPHIA, 1503 Spruce Street.

NOTE.—The tendency to lateral complication of the angular deformity above referred to is not easy of explanation. Two solutions suggest themselves: First, that one lung has become partially solidified by intercurrent pneumonia, thus interfering

with the play of the intercostals, and inducing rigidity and contraction of all the muscles overlying them; and, secondly, that, for some reason not understood, the expulsive action of the expiratory muscles of one side has been more powerful than of those of the opposite side, thus producing greater injury to the articulating surfaces of the vertebræ upon that side.

THE HARDING MURDER CASE.

By S. VAIL WRIGHT, M. D., Greensburg, Indiana.

The trial of Israel Harding for the murder of his wife at Greensburg, Indiana, which resulted in the conviction and sentence of the prisoner to twenty-one years confinement in the penitentiary at Jeffersonville, presents a few points of interest in medical jurisprudence. The evidence in the case was circumstantial throughout. The prisoner claimed the death resulted from a fall backward across a rail. Dr. Hill and myself commenced an examination of the body thirty hours after death, weather intensely hot, Aug. 1st. No cadaveric rigidity; countenance calm and placid; gases escaping at intervals from the mouth; discoloration of posterior parts of neck extending as far forward as anterior border of sterno-mastoid; no discoloration of face; eyes entirely normal; no protrusion of tongue; a little bloody mucus from mouth on raising head. Dress fitted close up on neck, but at a distance of several feet ecchymosed spots could be seen beneath the angles of the jaw; on close examination showed two distinct marks on left side, and a larger, ill-defined one on the right side of neck. The superior mark on the left, directly beneath the angle of the jaw, showed the imprint of a finger nail, its boundary being crescent-shaped, and of a bright scarlet tinge, contrasting strongly with the body of the bruise, which was of a bluish black color. The integument had apparently been abraded, and thinned by the nail, the tissues beneath depressed, and the space filled with blood, which had been oxygenated through the cuticle. A lacerated wound, three inches in length, on the head a little to left of the median line, extending from the roots of the hair backward and outward, bifurcated at the posterior part, laying bare the skull, next attracted attention. This wound was of equal depth throughout, edges everted and ragged; no hair cut.

The scalp slightly detached from skull on left side. The bifurcation enclosed a bit of scalp firmly attached; no depression or fissure of skull felt at bottom of wound; some extravasation on turning back scalp; the parietals overlapped frontal at vertex, and a linear exostosis along the fronto-parietal suture, sufficient to arrest passage of scalpel handle from before backward; brain normal; pia mater congested.

The investigation suddenly closed because of outside interference and imbecillity of the coroner, an old man who entertained a very small opinion of doctors. Ninety-six hours after death the body having been disintered, the examination was resumed by Dr. H. and myself. Body greatly distended with gas; flies getting below level of coffin sides instantly fell dead from effects of carbonic acid; posterior portions of body, face and neck throughout black; anterior portions and arms of a white waxen appearance; glove removed from left hand showed a complete dislocation of thumb backward on metacarpal bone; ball of thumb black; dissection showed extensor tendons lacerated and muscles of palm disintegrated; bruises on left arm at several points; a large one just above the point of flexion of elbow; muscular disintegration going on at these points contrasting strongly with dissections made in immediate vicinity for comparison; lungs collapsed; pericardium distended with gas; heart entirely empty, ventricles of normal thickness, valves intact, no hypertrophy, average weight; about two ounces of blood flowed from thoracic-aorta on section, pale color, thin, decomposed; lungs found extensively emphysematous; air escaping in little longer time than necessary to fill them through a large blow-pipe; muscles of throat found in a disintegrated, broken down condition; left cornu of hyoid separated from body, cornu cartilaginous, except at their tips; no disintegration of muscles of back; no injury of spinal column.

Here we have undoubtedly a case of manual strangulation, yet the appearance usually accompanying almost entirely absent. How account for this? We believe the wound on the head was caused by a blow, which produced a decided effect on the circulation; that congestion of the face and scalp was relieved by hemorrhage from that wound, although a medical expert testified regurgitation here was impossible, because the veins were full of valves; that after the grasp was relaxed circulation continued

feebly for a time, we think, is proved by the most powerful cavity, the left ventricle, contracting last, the charge being found in thoracic aorta. The emphysema of the lungs might have been found twenty-four hours after death, but is it not more probable that it was owing to decomposition, the gases generated rupturing the tissues in escaping? Fracture of the os hyoid, we all know, is infrequent, and almost without exception from direct violence. This bone with the heart and lungs were removed, and after a careful examination of them, by Dr. H. and myself, I put them in alcohol. They were not in a very attractive condition as regards odor, and I put them in a back room. Being called to an adjoining county for a few days, about six weeks after I noticed on my return a very small amount of alcohol in the jar, and on fishing up the hyoid with a tenaculum, lo, the right cornu was separated as the left. I suspected an enemy had done this, but the question was not sprung at the trial, and I am left in doubt. Did decomposition and the action of fluids effect separation of this cartilaginous cornu from the body in forty days.

CLARKE COUNTY MEDICAL SOCIETY—OCTOBER MEETING.

ISAAC KAY, M. D., Secretary.

This Society held its regular October meeting on Thursday, Oct. 8th, commencing at two o'clock P. M. Dr. J. H. Rodgers, the President, in the chair. Members present, Drs. Banwell, Bryant, Gillett, Hazzard, Kay, Kennedy, McLaughlin, Pollock, Rice, Reeves, R. Rodgers, J. H. Rodgers, Senseman and Stoneberger; visitors, Drs. Casper, Hachenberg and Truman.

Dr. Kay reported a fatal case of placenta previa, or unavoidable hemorrhage. The patient was a primipara and considerably under size, but no great difficulty had arisen from the latter circumstance. He was first called to see the case on the 26th of last July, and the patient died on the first of August. It was not a partial but a complete case; and what made it still more rare in its character was the fact that there was an ante partum expulsion of the secundines. After calling skillful counsel the hazardous manual operation of version and extraction was resorted to as the only means that promised even the most faint ray of hope in the case. It was impossible to ascertain the entire

character of the case until a somewhat advanced stage, owing to the undilated condition of the os uteri during its earlier history; and for this same reason any interference from art was impossible so far as it related to an operation. Dr. Churchill, of Dublin, who was one of our highest and most reliable authorities upon this and kindred subjects, has stated that the first case of ante partum exclusion of this kind mentioned in medical literature was by Lossius, in 1662. Smellie and Lee recorded three, Ramsbotham five, Hamilton two, Baudeloque, Merriman and Collins one each. Down to the time that Sir James Simpson, of Edinburgh, issued his great work, there had been tabulated 130 cases—56 from published and 74 from unpublished sources. These tables show a fearful mortality attending this class of patients. These tables of course included but a small proportion of the more common forms of placenta previa; especially the partial, being of comparatively frequent occurrence. Dr. K. then gave the history, chief characteristics, and management of the reported case with minuteness, and commented at length upon some of its most peculiar features. Death doubtless had resulted from exhaustion.

Dr. Hazzard gave his own experience with placenta previa. He had a case fifteen years ago which passed to a rapidly fatal termination. And still more recently he had another of less severity, which recovered. These were, neither of them, of exactly the same nature as the one just reported. Dr. H. claimed that in nearly all fatal cases from excessive hemorrhage, death was immediately preceded by convulsions. He thought that this was a matter that should be noted in the discussion of the reported case. If there be no convulsions there is a probability that the death had occurred from some other cause than hemorrhage. Dr. H. illustrated his subject by observations made upon the lower animals.

Dr. Reeves gave the particulars of one case of placenta previa occurring in his practice, about twenty years ago. The mother lived. In a second case there was a fatal termination in five minutes after version. He had collected some statistics of cases occurring within his own professional observation, and found that in a fearfully large proportion of cases there was a fatal result, both to mother and child. Dr. R. recognized three different kinds or modes of death, dependent upon the manner in which it makes its appearance; and he applied this analysis to

the case in hand. First, we had death beginning in the brain, second in the lungs, and third in the heart. He then proceeded to discuss the question as to how it was that hemorrhage produced death on the one hand, and such agencies as chloroform on the other. Dr. R. then ably pointed out the two prevalent modes of arresting uterine hemorrhage. Many distinguished authorities were arrayed in favor of each mode. He referred to English, German and American writers, to show the drift of modern medical literature upon the subject under consideration.

Dr. Bryant discussed judiciously and clearly the probable immediate and remote causes of death in the case reported at the outset. Cases of partial and therefore less formidable forms of placenta previa occurred more frequently, but entirely central and complete cases were very rare. He had never met with one of the latter sort and he never wanted to. He thought that chloroform might be used with impunity in the obstetrical operation required in unavoidable hemorrhage. It was difficult, often, to estimate the amount of hemorrhage occurring in some of these cases. Dr. B. had met with a partial case occurring in his practice many years ago, but the patient recovered. Dr. B. then ingeniously discussed the difference between death from chloroform and death from hemorrhage.

Dr. Kennedy made some valuable suggestions with regard to the care which should be observed in the administration of anæsthetics in these and other similar instances.

Dr. McLaughlin believed that in the case reported, the immediate cause of death was exhaustion from hemorrhage. He was thankful in being able to say that he had never met with anything of the kind in a long practice of thirty-seven years. Dr. M. did not subscribe to the doctrine that death from hemorrhage was generally connected with, or immediately preceded by convulsions.

Dr. R. Rodgers gave the history of three cases of placenta previa occurring in his long practice. The first lived only three days. The second recovered after having been in the most alarming condition from hemorrhage. In the third the patient also recovered.

Dr. Banwell had two partial cases of the complication under review. There was nothing very remarkable or serious in their nature.

Drs. Pollock and Stoneberger also attended to a few partial cases which they had treated with success.

Dr. Senseman made some remarks in defense of the use of the use of chloroform in these and similar instances. He had no sympathy with the indiscriminate attacks which were made upon this remedy from certain quarters. Dr. S. did not believe that the absence of convulsions was any evidence that death was produced by causes other than hemorrhage. Dr. S. never had much experience with this difficulty seen in its most partial forms. He would depend much upon position and ergot.

A pleasant, spicy, interesting and highly instructive verbal dual here sprang up between Drs. Bryant and Reeves upon the use of anæsthetics, especially chloroform, in this branch of medical practice. In this little *set to*, there was evinced a very creditable amount of medical lore, and of dialectic ability on the part of the disputants.

As the subject seemed to grow in importance and in interest, and as the investigation had necessarily to be left in a comparatively unfinished state, the same theme was continued to the next regular meeting to be held on the second Thursday in November. The Society then adjourned at half past 5 P. M.

PATHOLOGY OF MALIGNANT AND SEMI-MALIGNANT GROWTHS.

By H. E. HAUGHTON, M. D., of Richmond.

We enter upon the study of this subject by defining terms which are objectionable, and present it in the form of questions:

1st. What law produces departures from homologous development and produces heterologous growths?

2d. What are the conditions governing the development of physiological tissues?

3d. What conditions govern the development of pathological tissues or Neoplasms?

4th. Classification of Morbid Growths.

5th. Histology, Pathology, and Diagnosis.

We retain the terms malignant and non-malignant, because they are understood by the profession. They do not convey a correct idea of the pathology, but they are in common use; hence we retain them.

The terms homology and heterology are used in the sense as defined by Virchow: 1st. The separation of all new formations into homologous and heterologous ones. Homology, as it refers to new formations, simply asserts their benignity and development, after the type of the part or tissue in which they arise. Heterology, as it refers to new formations, is a deviation from the type of the part in which they arise, and may be benign or malignant. But this definition necessarily involves an extension of meaning as to the essential nature of any growth; hence, in the extension given by the author alluded to, *it* designates the difference of development in the new as contrasted with the old or parent tissue, which is essentially a degeneration, a deviation from the normal or typical conformation. "All Neoplasms are heterologous, malignant, degenerative, which deviate from the recognized type of the part in the arrangement of their cellular elements." All Neoplasms are homologous which develop after the type of tissues in which they grow, and in which the cellular elements are the same only in excess of the physiological or histological type; proceeding, then, upon the principle, viz: "that every pathological structure has a physiological prototype, and that no form of morbid growth ever arises which can not in its elements be traced to some model which had previously maintained an independent existence in the organic economy."*

"Homology means an error as to quantity of the elements in the structure, which simply means a multiplication of the natural histological structures to excess, which is hypertrophy."

"Heterology" means an "error-loci" in the lodgment of a growth, including also the idea of type deviation from the structures natural to the body.

We have been thus particular as to the meaning of terms used, as we find a different view presented which, when closely examined, states plausibly, but erroneously, a doctrine which we find thus stated: "If the use of the word 'heterologous' is restricted to the growth itself, or rather to the tissue from which it has sprung, the cancer cell is not found to be heterologous, but homologous; that is to say, the tendency of cell development in a cancer is to produce cells of one kind, and in a cancer the microscope shows that those tumors are the most malignant

* Virchow, p. 91 Cell. Path.; also p. 88.

which are composed of a large number of cells of the same kind, each cell reproducing its own kind, and having no tendency to take part in the support and normal growth of the tissue in which they are found." This is homology according to Dr. Speir,* which is not the view of other microscopists, and leads us to error. Then this being so, any rules as to diagnosis based upon such a view must be wrong, as the clinical history of many forms of Neoplasms prove. For example, one of the simplest growths, a Neoplasm, homologous in its character and history, is found in a fibrous tumor of the uterus, benign in character, yet, according to this author, most malignant, which view controverts all our clinical experience. Again, take enchondroma, which arises as an "error loci" (no essential difference between it and ordinary cartilage), yet is a *heterologous* tissue or growth as to parent tissue, not occurring where cartilage grows, yet it is homologous as to its own cells, which makes a heterologous growth, yet not malignant necessarily. This also contradicts the position of Dr. Speir, and changes this formation from his semi-malignant to malignant.

The same is true of other growths, and we shall not follow the principle of classification and diagnosis further than to say that Dr. Speir contradicts the arrangement and principle laid down by Virchow, while he adopts the same methods of procedure for pathological growths. "A heterplastic process," says Virchow, "engenders histological elements, which correspond indeed to natural forms, but these elements do not arise in consequence of a simple increase in the number of such as previously existed, but in consequence of a change in the original type of the parent tissue." "When cerebral matter forms in the ovary, kidney, or parotid gland, it does not arise out of pre-existing cerebral matter, nor through any act of simple cell proliferation." How shall we account, then, for these changes "error loci" in structure? If they were the result of simple cell growth, then would they be homologous, and so long as thus continued would be benign or non-malignant. But there is a time in their progress when this history is changed, and deviation from the recognized type in arrangement of cellular elements then marks the heterologous or malignant course of their future development.

In proceeding with the subject we accept the doctrine, "that

* The Microscope and Study of Cancer Cells.—*New York Medical Record*.

in physiology and in pathology no development of any kind begins *de novo*, and that all tissues, whether physiological or pathological, have their origin in cells; and the law,* *omnis cellula e cellula*, is true, and is the point of departure in this subject. Therefore a cell is derived from a parent cell, and by a law of continuous development we have normal tissue. Further, in tracing the history of tissue development up to a certain period, there is a point of departure, in which tissue changes are obvious, and in which we find, not continuous development," but "histological substitution of one equivalent in a certain group of tissues for that of another of analogous formation."† For instance, cylindrical may be exchanged for scaly epithelium.

If this history is true of physiological, even more is it true in diseased conditions in which a given tissue is replaced by another deviating from the original type in form, yet from the same group; maintaining the doctrine of heterology. In the examination of normal tissues, we trace a division into three kinds: first, tissues exclusively consisting of cells or cellular tissue; secondly, tissues in which the cells are separated by intercellular substance, viz: "connective tissues;" thirdly, tissues in which the cells attain higher forms of development and types aptly fitted for the purposes for which they seem to have been intended. These are found in the muscular and nervous systems, in the bloodvessels and blood. From these tissues, in growth and development, must come all formations, whether homologous or heterologous. In the process of normal development, where no undue influence or stimulus is felt, the organism is built up in a perfect and physiological manner. But we find that as tissues are brought under the influence of some irritant, irritation is developed and inflammation established. The influence of the irritant cause may so alter or change normal tissue that the original tissue is changed in its sensible qualities, and in its histological influence. Yet we find that the pathological development in this tissue is according to the type of development manifested in the normal tissue, and the morbid process is an excessive and abnormal proliferation of the cell growth. This is true of the tissues. Glands are in general the result of a proliferation of the cells, and are then the aggregation of cells

* Virchow, p. 54.

† (M. Lebert) Virchow, p. 100, Cell. Path.

which have open orifices or canals by which they discharge their contents, mostly fluid, which contains the specific elements or products of their development. But let us suppose a gland structure to become the recipient of some influence or element derived from the blood, or any other source which produces an abnormal increase of the action of the gland cells; we should have then a physiological condition changed into a pathological one, by which the rapid proliferation of the cells cast off the epithelium which produces changes of structure (if not as rapidly reproduced as removed); hence we may have casts of tubes or debris of gland structure, resulting in serious impairment or *destruction*, or it may be an hypertrophy, which is still homologous. The effort at repair is made during the same history; and if the gland, through continued activity, be repaired, we may have such a development of its elements that hypertrophy occurs. We may have this condition as exhibited in muscle, in enlargements of the heart; we may have change of structure in the thickening of tissues, giving rise to induration of glands, ducts, and tubes, which may become contracted, giving rise to stricture. The process of healing may give rise to new tissues, as in cicatrices, callouses, etc.; and such repair may go far beyond the normal want and produce a tumor. Finally, we know that certain transformations in the exudations occur, producing increase or enlargement of structure, and the result is morbid growth entirely foreign to the tissue from which, or out of which, it sprang.

Histology has not yet determined any distinctive elements by which any new or satisfactory classification can be made, and the ultimate elements of all morbid growths and tissues are reducible to six, and none of these, singly, is characteristic of any special kind of tissue formation. Indeed, as Dr. Spier claims to do, he enlarges the definitions of the terms "heterologous" and "homologous," as his reviewer said of him, "in a sense which is original with him," in this, "that he applies these terms to the condition of the elementary constituents of a tumor taken as not connected with their site, but with their individual, innermost structure." According to this writer, a tumor is heterologous which contains cells and derivations of cells of different types, viz: "multiform" and "compound;" and homologous when all the elements are of one type, or "uniform." But this view is

not original with Dr. Speir, as some quotations will show. Paget says: "Together with disorderly construction and peculiar cell forms, we may often observe, as characteristic of cancers, the multiformity of the structures composing their mass." He says again, p. 496, in describing the cancer cell: "It would be useless to describe all the shapes that may be found, for we can at present neither explain them * * * * nor connect them with any corresponding differences in the general structure or history of the cancers in which they severally occur." But we may observe, as Bruch and others have done, this multiformity as a feature of malignant structures. The assumption, therefore, to which we have referred, is not new, and is not a means invariable, or positive, by which diagnosis of such tumors are made, as Paget and many others tell us that cartilaginous, fibrous, and even osteoid cancers, possess sometimes this compound or multiple form, and yet are innocent, benign, homologous tumors. Herein is a contradiction, and hence we are thrown back to find some basis of diagnosis which contains some unerring principle or method.

Again, the existence of the cancer cell, and ability always to detect it, *would be a means of diagnosis* clear and defined; but it is admitted, that a growth like cancer is, from a variety of influences, deflected from its regular course, and the typical cancer cell is not thus *discoverable*. Paget says "that no observation since Mueller's time has yet invalidated his demonstration of this principle," "in fact no new type forms" occur. We have the authority of Rokistansky and Virchow for the statement, "that this is now sufficiently evident for all the simple cells and nuclei of cancer, and the more complex endogenous cells and nuclei find their parallels especially in cartilage, the primary structure of medullary matter, in the thyroid and other gland structures." The writer, to whom we have referred, ranks himself among those "who have a positive and firm conviction of the existence of certain cells which, when found in morbid growths, are diagnostic of cancer." He says there are two such cells, one is the "mother cell," or "compound cancer cell," long recognized by authors as the "*cancer* cell." He says the "free nuclei" of authors are the elements upon which we can rely with great certainty, and are in reality as specific cancer cells as the "mother cell." "It is a complete cell."

We thus present Dr. Speir's view, to contrast it closely with what is said of these cells by Vogel (whom Virchow generally confirms), as Paget asserts. "Cellular structures form a very important class of elements, which are never absent in perfectly developed forms of cancer. They sometimes predominate to such an extent as to form nearly the whole tumor, as in encephaloid, but are only of secondary importance in hard cancer (scirrhus)." The cellular structures occurring in cancer are of two kinds: first, such as during its whole process of development can never exceed the cellular form. These cells he calls transitory, as well as the "characteristic cancer cell." He describes, also, in his arrangement, the "persistent cell," and then thus describes them: "These persistent cellular formations exist in the normal body, and are subservient to organic life, and to certain definite objects, as protection from without, secretion and absorption; so also in morbid processes we very frequently meet with a species of cellular formation, in which secondary cells, which have proceeded from primary cells, discharge on functions connected with vital process." A large number of morbid products come under this head as pus, and the heterologous forms of epigenesis, as tubercle, encephaloid, scirrhus, etc. Secondly: "The characteristic cancer cell presents extreme variations from the single cell, through every modification of which a simple cell is capable, up to highly developed cellular forms, varieties which in every case depend for the most part on the degree of development of the primary cells, and are sometimes transitory and sometimes persistent stages of development. The primary forms of these cells present no peculiarity. The nuclei vary from the 450th to the 250th of a line (1-2500 of an inch—Paget) in diameter, are insoluble in acetic acid, and often contain nucleoli. The cells are round or oval, nucleated, vary from the 30th to the 100th of a line in diameter; entirely dissolve on the addition of alkalies; and disappear, with the exception of their nuclei, on the addition of acetic acid."

These are the "*compound cancer cells*" clearly described, the same as described by Dr. Speir. The forms "still more characteristic of carcinomatous tumors, are the cellular forms, which frequently but not invariably are associated with the primary forms, and but rarely occur independently of them." These are the "*complete cells*" in which Dr. Speir says "there are no nuclei"

(in which he is mistaken), but which he *makes essentially* diagnostic of cancer. These last forms, according to Vogel, are:

a "Peculiarly formed caudate ramifying cells."

b "Cells containing a large number of nuclei (from two to twenty or thirty), or enclosing in their interior perfect young cells."

c "Cells with a very thick wall with a double contour."

d "Double cells, formed either by division of one or the fusion of two cells."

e "Cells filled with granules (granular cells), and others in which granules appear to be scattered over the surface."

Thus we have quite accurately given, by a distinguished German pathologist and microscopist, essentially the view, and fully and completely stated, as to the "cancer cell," its two forms and divisions. He then proceeds to say (p. 269), "Between these different forms of cells there occur innumerable transitions, and they are all doubtless to be regarded as primary cells in different stages of development. Some of these forms occur principally in certain varieties of cancer, of which they may be deemed characteristic. Hence, it follows that of all the above forms there is none that can be deemed as solely pertaining to cancer; in fact, that there is no such thing as a distinctive cancer cell. Consequently, from observing a single cell under the microscope, it is impossible to decide with certainty whether it is cancerous or not."

Thus we have presented carefully the views of Prof. Vogel, and his conclusion, and, so far as we know, except it may be among the enthusiastic microscopists, the same view is the accepted view to day. Yet we would not undervalue the methods by which these problems can be worked out; still it is quite clear that the propositions which have been credited to Dr. Speir, of New York, are incorrect, contradictory, and do not advance us a single step. This being the status of this question, we are not surprised that "Velpéau is reported to have said, that more could be gained by observation than by the microscope." And this belief now holds good among many men; hence, we find that the whole question is referred to clinical study for its settlement, and is embodied in this proposition, viz: "The question of malignity or non-malignity is one of clinical estimation entirely."—(*Dr. Krackowizer.*)

But returning to the first question, we ask, What law produces departures from homologous development and produces heterologous growth? We answer, a multiplication of cells, frequently, with "histological substitution." But in answering the first question, we must necessarily answer the second, viz: What are the conditions governing the development of physiological tissues? To do this we take, as has been done before, the egg, the prototype of all formative fluids, and watch the progress and development into animated existence. Under favorable and normal circumstances, we have all the conditions necessary to the development of normal tissues, and those tissues have the power of appropriating and converting the elements of nutrition to their own growth. Let us keep in our minds the correspondence between embryonic and pathological development laid down by Mueller, and the doctrine rigidly maintained by Remak, that the cleavage of the yolk in the egg is due to a division of cells, to the growing in of partitions into the interior of the ovum. Here we have progressive acts of division on the part of a simple and single cell, in which we have the origin of new formations, which are again (the simple multiplication of elements) changed by sources of irritation coming from extraneous sources, while the formative or vital forces are in continual play. Thus the cells undergo changes in form and number, and the neoplastic formation is begun.

If we take a human embryo, and watch its progress, we find that the blood of the mother furnishes the material of growth, and, nothing interfering with such development by disease or accident, we have a perfect type of the *genus homo*, the tissues, it is true, soft and succulent, yet embodying the type of the more perfect man in his fuller and maturer development. That these tissues may be perfectly nourished, the construction of the body is such that blood is perfectly distributed by means of capillaries conveying a fluid supplied with all the materials necessary for each particular tissue, and the power, which is an inherent power in each tissue, to appropriate whatever is necessary for its growth; as Virchow express it, "a selective affinity" for the "pabulum" of life thus furnished.

As man does not grow and mature without being constantly subjected to noxious influences, which may arrest, retard and impair the normal and healthful influence, we must consider him un-

der the varying conditions of health and disease. The influences which operate upon us to produce disease are very often independent of our knowledge, and as a consequence beyond our control. Thus individuals come into existence apparently in perfect health, and continue so for years, yet at a certain period of life become subject to some dyscrasia, and a gradual impairment of health takes place. Again we are under the conviction that some if not all of the dyscrasia are the diathesis of inheritance. Among these prominently are tubercle and cancer, which represent the worst types of heterologous Neoplasms.

When a parent has tubercle or cancer, why do we find so often, in different individuals of the posterity, at the same period of life, that they manifest the same disease? We do not believe the law of organization, which transmits form, feature, disposition, with color of hair and skin, is any the less a *law* when it comes to deal with questions of disease. Yet such is the accuracy of our knowledge upon these points that, *clinically* speaking, it amounts to demonstration. We have a conviction that this is the *law* which moulds the *cell*, and thus a neoplastic development may begin entirely consistent with the operation of this law, and its necessary and consequent result. We are here treading the border line between normal and abnormal conditions, and outline the law of physiological development—that all organisms, tissues, fluid or solid, in normal development, spring from a cell, and that cell, and the tissues which grow out from it, must be homologous.

CLASSIFICATION OF MORBID GROWTHS.

Malignant Growths :

- Varieties*—*a* Scirrhus;
b Medullary;
c Epithelial;
d Melanotic;
e Osteoid;
f Colloid.

Non-Malignant Growths :

- Enchondroma;
 Recurrent Fibroid;
 Fibrous Tumor;

together with all other tumors which do not present the characteristics of those in the first class. We may indeed differ as to

classification, but there are but two classes, viz: malignant and non-malignant. We do not admit that a growth can be half-way malignant.

The classification thus being simple, and covering the entire ground of tumors, enables us to take a comprehensive view of the question. We know, as a clinical fact, that it is the nature of non-malignant tumors to grow out of the primary elements of the tissues, and maintain their existence, and share in the wear and tear of tissues the general metamorphosis which occurs in the body. And as this process goes on under varying circumstances, causes which may be esoteric or exoteric, may so operate that destruction, softening, and removal are the results.

Again, malignant tumors proceed to destructive metamorphosis from esoteric causes. Here again we have no distinctive difference diagnostic, as between the two classes. If we look at the history of inflammation, we see effusion, solidification the result of cell changes, softening, which leaves the original tissues to resume their proper functions. But in the malignant degeneration the softening is not confined to the morbid epigenesis of the original histological elements, but parent tissues become involved in the process of softening. The former process is an ordinary healthy suppuration; the latter is ulceration, and is a clinical distinction in the history of events. Yet there is still another view in which the distinction is drawn more fully, that in tubercle, typhus deposit, and inflammatory suppuration, the destruction is local and circumscribed, while in the malignant epigenesis the destruction is removed from the primary point of disease, and by extension becomes general, and destroys the patient. Thus far, however, we have only local and general infection, which is not yet distinctive or diagnostic. If, after removal, the disease returns, it has been claimed to be diagnostic of malignant disease; yet it is known, and Travers asserts, that not only tubercle but cancer may be cured without recurring.

Again, we do not find anything distinctively diagnostic, and we have nothing that is diagnostic differentially, between homologous and heterologous tumors, until we can fix upon a cancer cell which shall always present such a uniform appearance, that when you bring the microscope to bear upon it, it can certainly be pronounced malignant. So far this has not been satisfactorily done, and the diagnosis of such tumors yet turns upon their

clinical history and behavior. These tumors of malignant epigenesis do not therefore arise from any transmutation of normal tissue, but are new, morbid cellular formations diffused among the normal tissues, as is found very distinctively in tubercle and scirrhus; and we thus are forced to the conclusion, from the history and progress of such formations, that they are produced in a fluid state, and infiltrate the interspaces of the connective and other tissues in such quantity as to form a tumor. That this fluid comes from the vessels is quite as clear as that it is a fluid; and after its deposit it is known that cells and nuclei and fibres are found to exist; and also it is known that in proportion as cells or fibres predominate, so is it quite as clear that we have malignant or non-malignant growth; "that cancer cells do enter the circulation, and the fact of their occasional presence in the blood has been indisputably established by Virchow, Bennet, Paget, Quekett, Vogel, and others." "But the inference drawn from this fact has in no instance been borne out, for wherever the cancer cells had crowded together they had obstructed the capillaries, cut off the circulation, and set up mortification, or, as Virchow terms it, "necrosis." The cancer cells in the blood, by their size, compared with the caliber of arteries, renders their arrest obvious and inevitable. "They will thus at once become the nucleus of a thrombus engrossed by fibrine, and thus cut off the supply [of cancer cells—*writer*] from the circulation. Before they could organize the new-found lodgment, their morbid effects upon the tissues would manifest themselves, and thus lead to the structural disintegration of parts thus impeded."

This author does not believe that a reliable diagnosis of cancer by a microscopical examination of the blood can be made, from the fact that "the blood of every patient with malignant disease does not carry cancer cells. Their absence from the blood would prove nothing; and their presence (were a characteristic cancer cell made out) would only corroborate a diagnosis sufficiently clear already by clinical history and progress of the disease."

If it be accepted, so far, that the cancer cell has not been microscopically demonstrated to exist as such, in the history of cancerous growths or in a cancerous diathesis, we now have analogically other evidence from another source to prove the same thing, viz: that so far the microscope has failed to demonstrate the existence of certain cells in the blood, which is claimed as absolute proof of specific forms of disease.

I would here remark, *en passant*, that while I do not discredit the value of the microscope in any investigation which may throw light upon our pathway, I am led to believe that the claims which have been made by some enthusiastic microscopists are premature, and require more time and patient observation. The proof we now introduce, as to the claims set up for microscopic observation, as yet have not been made good, viz: the claim of Losterfer, of Vienna, in which he claims he has discovered syphilitic corpuscles in the blood, and which he asserts are an unfailing sign of syphilitic infection. Prof. Stricker and Prof. Hebra have supported Losterfer in his view without assuming its correctness, while Prof. Wedl, with Gruber and Newman, opposed the claim, and severely criticised the methods of examination as used by Losterfer. Prof. Stricker is not prepared to state positively what these bodies are, described as "minute, bright corpuscles," and has examined the blood of many healthy persons, viz: five cases of lupus, five cases of variola, three cases of typhus, and one case of typhus abdominalis, and in none of these did he discover the cells in question, except in those of lupus, which only raises the question whether lupus is a form of syphilis or cancer. It is admitted by the observers themselves "that the nucleus of the colorless corpuscle of healthy blood does resemble the body of the syphilitic corpuscle." The conclusion reached so far is that it is not proved that the Losterfer corpuscle is a syphilitic corpuscle, but that it is a result of the disintegration of the white corpuscle of the blood, as these are known to break up or disintegrate early. Dr. Stricker has so far declared his inability to form an opinion of their value as to specific diagnosis.

Thus the question in this direction stands, and also in reference to the cancer cell. We are yet to prosecute the observation in this direction, and while doing this, we are thrown back upon the clinical observation of facts for whatever we have of positive knowledge. Prof. Atlee, in the surgical section of the American Medical Association, in answer to a question if he had brought the microscope to bear upon the cancer cell, said no; evidently assenting to the doctrine of a specific cancer cell, and claimed, upon the basis of his own clinical experience, that "arsenic destroyed the cancer cell, and thus cured cancer." He admitted the statement, however, as here made, that the microscope had

not differentially made out any such thing as the "specific cancer cell." Thus the question rests as to the cancer cell and the syphilitic corpuscle, so far as the microscope is concerned.

But we are waiting and watching for the truth, which may be born of the morrow, and no one will more cheerfully hail it than myself. But while we labor and wait, let us not forget the records which anatomical and pathological research, as well as the clinical experience of the past, have made; and remembering this let us not forget that it is but a short time since Conheim announced the character of the white corpuscle of the blood, and that within the vessels it is the white corpuscle of healthy blood and without the vessels it is the genuine pus corpuscle. (Virchow.) Let us not too easily be diverted from the broad field of pathological labor and investigation, by the enthusiasm of the discoverer of apparent or genuine truth, nor by the splendor of the results which would seem to be attained, as these sway our minds and warp the judgment; but be like the more solid, impassive, stern grandeur of the German mind in investigations.

THE RADICAL CURE OF RUPTURE.

Prof. John Wood, of King's College Hospital, has these instructive remarks on this subject:—

I have long thought that we might, in favorable cases, safely do more than we now attempt, to prevent a return of the protrusion after the operation for the relief of strangulation. After performing operations for the radical cure more than two hundred times, I had grounds for the belief (which other operations on the peritoneum also favored) that in a healthy subject the peritoneum might be dealt with as freely and as safely as any other tissue: and also that the chances of bad results from peritonitis would depend upon the injury sustained by the bowel in strangulation, rather than upon any way of dealing with the peritoneal sac and parietes after the strangulation had been relieved, provided that due drainage be secured. In cases where the bowel and omentum are congested only, and most likely to recover when placed into their natural cavity, especially in young and healthy subjects, I concluded that the attempt would be justified, and would probably be successful. If so, the advantage of preventing a lifelong trouble by the operation which relieves strangulation is obvious. The kind of cases I selected for such an attempt, and the nature and results of the proceeding, will be

best conveyed to your minds by a short *resume* of the three cases where I have had the opportunity of carrying it into practice.

On June 29th, 1868, was admitted into King's College Hospital a young man, Alfred Fuller, aged 21, 61 Warden Road, St. Pancras, with a strangulated right oblique scrotal hernia. The tumor had occurred suddenly from lifting. It was of the size of the fist, and had been strangulated twenty-four hours. He had constipation, violent retching and vomiting (not fecal), a quick pulse, and anxious face, pain in the epigastrium, and much pain and tenderness in the tumor, upon which several ineffectual attempts at taxis had been made. I put him well under chloroform, and made a fair and full attempt at reduction by the taxis, but in vain. I then made an oblique incision over the tumor, dividing the layers in the usual way, and laying open the sac to the extent of three inches. The sac contained a moderate amount of omentum, covering a knuckle of bowel, all congested, and the bowel slightly ecchymosed; and there was about an ounce and a half of bloody serum in the sac. The point of strangulation was at the deep inguinal ring, and it was divided by an upward cut. The bowel was then drawn down slightly, and carefully examined. It presented the usual indentation, but was smooth and shining. It was then returned, and after it the omentum; the latter being carefully spread over the deep opening. The sides of the sac were then brought together, so as closely to embrace the cord over the whole length of the canal. The handled curved hernia needle used in my operation for the radical cure, armed with silvered wire, was then employed to bring together the sides of the sac, together with the aponeurotic structures along the whole length of the canal. A good view of the conjoined tendon was obtained, and the wire fixed in it in two places. The loop and ends of the doubled wire were then brought out at the upper and lower ends respectively of the incision. Four interrupted wire sutures were then placed through the skin between these points. The wound was dressed with carbolic lotion, and covered with gutta percha skin and cotton wool powdered with M'Dougall's powder to absorb the discharges. The interrupted sutures were removed on the fourth day, primary union having been by that time obtained throughout, except where the thick wires passed through the extremities of the wound, and effectively kept up the drainage. These were kept in for ten days. There was not the slightest sign throughout the case of the peritoneum being inflamed, and the abdominal tenderness which was present at the time of the operation passed away entirely. The sickness ceased directly after the operation, and the bowels were opened naturally two days afterward. Erysipelas being present at this time in the ward, the patient was attacked by it on the sixth day. A partial re-opening of the wound was the consequence, together with suppuration in the

fundus of the hernial sac. The pus passed freely along the wires, and there was no burrowing. The suppuration in the sac caused obliteration and shrinking of that structure, and the testis was drawn by the subsequent contraction into the upper part of scrotum. The patient was discharged, wearing a light truss, August 15th, 1868.

During the first year after the operation I saw him twice or three times. There was no cough impulse whatever when last seen; all the parts being very firmly trated up in the groin and around the cord. As he was repeatedly enjoined to show himself at once if any pain or weakness showed itself, and seemed fully impressed with the danger from strangulation which he had escaped, I have, I think, some right to conclude that there has been no return. The difficulty of following cases for a number of years in the nomadic habits of that part of our population which furnishes the most numerous favorable cases for the radical cure is one which I experienced in this case.

It has been said with respect to this operation, that evidence is wanting as to the permanency of the cure, and I am free to confess that it is exceedingly difficult to watch a couple of hundred cases for the space of ten or eleven years. The constitution of human nature is such that you cannot hope for the generality of patients to show themselves occasionally for such a length of time, or even to write reports to the surgeon if they are not further troubled with the ailment of which he has cured them. It requires that powerful spring to gratitude which was said by the cynical French philosopher to consist in "a lively sense of favors to come," which is wanting in a case where there is no more for the doctor to do. I have found that the unsuccessful cases are more likely, by the law of gratitude just enunciated, to return upon your hands than the successful ones are, as a bad shilling expects to be replaced by a good one. I think, therefore, we have the better right to the position of reckoning in the same proportion of failures and cures cases which have not been seen twelve months after the operation as those which have been examined after that time.

Now, out of 188, most of them unselected cases of inguinal hernia, of which I have notes (including 7 females and 4 cases of double rupture, both operated on), in 107 cases the results are pretty perfectly known. I find that 51 of these were more or less unsuccessful; 42 returned in the first year after operation; that is, the patient could not do without wearing a truss after the first year. Of these, by far the greater number were so much improved that they were made comfortable by a truss, which was not the case in most instances before the operation. Some, but not many, were as bad as before the operation. Mr. Kingdon, of the City of London Truss Society, has kindly forwarded to me the names of twelve of those who had applied to that institution for the supply of a truss after an operation at my hands.

Out of the 107, 56 were cases which continued to be successful subsequently to a year after the operation, as ascertained either by direct examination by myself, other surgeons, or satisfactory to the patient himself, and either wearing no truss at all, or only occasionally, as a precaution, after the first year from the operation. Of these, 7 were noted from thirteen to twenty-one months after the operation; 7 two years; 7 three years; 7 from four to six years; 7 from six to eight years; and 4 from nine to eleven years after operation. Reckoning operations on both sides and repetitions of the operations, I have done the operation more than two hundred times. Out of these, I have had three deaths; one from pyæmia, one from erysipelas, and one from peritonitis. These have been made public to the profession on more than one occasion, because I judged it right and fair that in an operation of this kind the facts should be made known as far as possible.—*Med. and Surg. Rep.*

SLEEPING ROOMS.

By LEWIS W. LEEDS, of New York.

That old-fashioned dread of night air is so rapidly disappearing that it will soon be referred to as one of the singular prejudices of a by-gone age. But there still lingers in the minds of many persons a suspicion that you must not sleep in a draught.

They think it is good to have fresh air, but it must not blow directly upon them. Now, I have not the slightest doubt that if every individual in the city of New York were to sleep on the house-top instead of in their stifling rooms, the rate of mortality would be reduced twenty-five per cent. in three months; and if they could have blankets enough to keep warm, and merely screened from the rain at night, without obstructing the currents of air—or, in other words, to sleep directly in *all the draughts* they could get—the mortality would be reduced one-half in one year. Consumption, that purely foul air disease, would rapidly disappear from among us; and instead of 384 children dying under five years old, as died in this city last week, infantile deaths would be as rare as they are in the log cabin districts of Virginia and Kentucky, where the family consists generally of man and wife and from ten to fifteen children, and where puerperal fever is unknown.

Nepoleon is said to have remarked, on that bleak wintry march from Moscow, that fewer men froze to death without tents than smothered to death with them, and any of our great generals will tell you that they would lose fewer men by having them all sleep in the open field—provided *only* they could be kept *warm*—than if they were all sheltered by the best barracks ever built.

Now, it is *warmth* alone that determines the amount of fresh air you can afford at night. The poor woman, with her thin, poor blood, who has but a tattered quilt to cover herself and her half-starved infant on a cold winter night, cannot afford to sleep with open windows. But this plea of economy does not apply to many thousands of wealthy citizens who habitually put their children—if they can succeed in keeping them alive beyond their babyhood—in close, shut-up rooms, that are disgustingly foul to any one accustomed to sleep in pure, well-aired rooms.

Where the body is kept warm, and pure air only inhaled, there is not one particle more danger of taking cold in sleeping directly between two open windows all the year round than there is in taking cold in riding in an open sleigh when thoroughly warmed by wrappings of furs and robes. and such a thing as taking cold under such conditions never occurs, providing always the thorough warming of the feet and back, which are often neglected.

It is generally much more difficult to avoid taking cold in the daytime than when in bed. For instance, if you eat a hurried breakfast and walk a square or two with sufficient energy to start the perspiration, and then with damp feet and a moist skin enter a crowded, foul omnibus or car, and sit with your back towards a cold window until you become chilled; a cold is the usual result even to the most robust constitution. Liability to take cold also exists in almost every store or office, and in our ordinary railroad traveling in the winter season, on account of the cold floors, causing cold feet, and exposure to sudden changes of temperature operating on small portions of the body.

Every active business man is liable, therefore, to go home at night with an incipient cold. And it depends upon his sleeping room, which is under his own control, whether he is cured of that cold before morning, or whether it is aggravated and added to; and so on until he becomes one of that great and popular crowd of foul air victims—*consumptives*, who form such excellent customers for quack medicine men. Now, I often take cold and go home at night hoarse with an inflamed and sore throat, and I merely state my own practice for many years past to illustrate what I think is the true principle to act upon. If stopping at a hotel, I ask to be put up several stories high, as the air is generally purer. I also prefer a south-eastern exposure, as the beds and everything smell sweeter on that side of the house, having been purified by the greater amount of sunshine. I always insist upon having an outside room, and never, under any conditions, accept of that class of rooms, unfortunately so common in our American hotels, which open only on *closed walls*; preferring a sofa or cot in the parlor, or, better still, another house. Having thus secured a good room, and by getting two or three extra blankets (if it is very cold), with the addition of my woolen traveling shawl, abundant warmth can be secured.

If there are two windows in the room, I draw the bed between them, raise one clear up and lower the other entirely down. If but one window, divide it, half open at top and half open at bottom, drawing the head of the bed directly under the window.

The lungs are soon filled with the fresh, cold, invigorating air, and with the rapid flow of blood induced by the extra excitement of that cold air, quickly produces a genial warmth over the whole body, and a sound refreshing sleep. I generally awake in the morning quite relieved of the previous day's cold, ready for the battles of another day. But if, with such a preliminary cold, I should be so unfortunate as to have to sleep in some friend's house, who would do me the honor to put me in the best spare room in the north side of the house, which had been carefully closed to keep the sun from spoiling the carpets (or rather the light, as there would be no sun on that side of the house), and the mattress, as soon as warmed, began to give off that disagreeable odor of all unsunned mattresses, I should get but a poor, broken night's rest, with my cold worse than the day before. And a repetition of this for a few nights would give me such a permanent cold as could scarcely be cured in two weeks, or one that might result in lung fever or consumption.

A bedroom, therefore, to be pure and wholesome, should be open all day to the purifying and disinfecting rays of the sun. The bed should never be made up in the morning, but should be kept in the sun and air all day, and each blanket should be hung up separately so as to be thoroughly purified and disinfected. And, if it can possibly be avoided, a bedroom should never be used for a sitting room.

The difference between inhaling cold air and warm air is but little understood; most persons who have noticed that cold air is more invigorating, attribute this difference to the fact that cold air being more dense, a greater amount of oxygen is inhaled in the same bulk of cold air. But this does not account for all the difference, as the blood circulates much faster when one is breathing air near zero than it does when breathing air near the temperature of the blood; but the difference in density due to that difference of temperature would be but one-fifth. There must, therefore, be some other cause for the stimulating effect of cold air. Many persons suppose that warm air, *if pure*, is just as invigorating as pure cold air, which is a great mistake.

If we wish to have good, robust health, we must breathe cold air. To keep warm while surrounded by cold air is much more difficult while sitting up than while lying horizontal in bed. Therefore, the night and in bed is the great opportunity for recuperating the exhausted strength of the body; and a cold, well-aired room, thoroughly sunned all day, is much better for this purpose than a warm, close one shut up through the day to become mouldy and poisonous. Some writers lay much stress

on the size of bedrooms, but this is of no importance. An ordinary coffin is quite large enough for a wholesome bedroom, provided both ends are open, and a good current of air passing through from head to foot.

Very careful observation for many years past has convinced me that infants can bear to advantage much more fresh air than they usually get. I have watched with great interest experiments with infants allowed to inhale very cold air, and most persons would be astonished to see how they thrive on and enjoy breathing the pure, cold air in winter when carefully wrapped up to insure warmth. Of course nothing but a very ignorant person or barbarian would smother the little innocents by putting cloths and vails over their faces.

They can bear much more fresh air at night than most of our thin, foul-air poisoned and dried-up citizens of the present day. The doctors say the healthiest babies are those who are permitted to sleep out of doors most, in baby-wagons or otherwise. If all our citizens could sleep in open, well-aired and sunned rooms, and use blankets instead of coal, I believe Professor Faraday's assertion that the natural duration of the life of man is one hundred years, would be found much nearer the truth than is generally supposed.—*Sanitarian*.

SUGGESTIONS FOR THE TREATMENT OF THE ALGID STAGE OF CHOLERA.

By HARVEY L. BYRD, M. D., Professor of Diseases of Women and Children in the College of Physicians and Surgeons of Baltimore, Md.

In view of the fact that cholera exists and has prevailed to a considerable extent in some of the cities and towns of the West and Southwest, and the world-wide knoweldge of its great fatality under all the plans of treatment hitherto pursued, we are induced, to offer some suggestions for the management of the disease in its most fatal stage.

In the first stage of cholera, experience has fully demonstrated the value of medical treatment, when based upon correct principles, and recovery is, generally speaking, satisfactorily frequent. But in the algid stage and stage of collapse death takes place to a lamentable extent, and, so far as the knowledge and experience of the writer go, the prognosis in this stage, under any system of treatment hitherto pursued, is always unfavorable. Fortunately for Baltimore, no case of cholera has been seen within its limits during the present visitation to this country, and it is earnestly hoped that an opportunity may not occur for a practical test of the remedies soon to be mentioned for the treatment of the cold and collapsed stages of the disease, in this city.

Though singly they are not new, they are brought to the attention of the profession now that they may be tried in the order indicated below, if deemed advisable or proper by the physicians engaged in the management of the disease where it prevails. In summing up and comparing his past experience and success and the success of the profession generally in the treatment of the stages of the disease alluded to above, the writer feels warranted in making such suggestions in regard to their management as may offer plausible, not to say philosophical, hope of success. The blood is undoubtedly altered in a most essential manner in all cases of cholera, particularly when the disease has advanced beyond the first stage, and the capillaries, and nerves controlling their action, become involved in the copious escape of its more fluid constituents. The precise character of the change which the blood undergoes in a person exposed to the choleraic poison for a sufficient time to produce the disease, we have at present no positive means of ascertaining, and speculations of our own in regard to it would be out of place in a brief paper like this. The altered condition of the blood, and the perverted or abnormal action of the capillaries and the filaments of nerves distributed to them and to the skin and mucous surfaces of the stomach and intestines, are phenomena that may be witnessed in every case of cholera on the occurrence of the algid or collapsed stage of the disease. The remedies proposed in this stage of cholera are transfusion of healthy human blood, or that of sheep or goats, the hypodermic injection of ergot or ergotine, alone, or in conjunction with strychnia, and the electro-magnetic current. The action of these agents in the algid stage of cholera must prove beneficial, if we consider their physiological effects on the human organism as fully established. It is not proposed they should be used simultaneously, but probably in something after the following order: First, transfusion of healthy human or sheep's blood in sufficient quantity; then the hypodermic injection of ergotine for its specific action on the capillaries, and in a short time, if necessary to impart tone to the capillary nerve-filaments, the hypodermic use of strychnia; and, lastly, the application of the faradaic or electro magnetic current to the nerves, as the par vagum, requiring assistance in the performance of their accustomed functions. With this agent—electricity—we have dried and imparted warmth to the preternaturally wet and cold skin, and excited the kidneys to action, in congestive conditions the result of malarial poisoning, and also in a case of cholera during collapses. Vide *Charleston Medical Journal and Review*, vol. viii. p. 628, 1854.

The foregoing suggestions are the result of careful thought and mature deliberation, and will certainly be practically tested should the algid stage of cholera again claim our professional attention. Our experience has shown that *the recumbent position*

should be rigidly enforced as soon as the first stage of the disease is passed, and *the use of the bed-pan insisted upon for several days* after the grave symptoms have been subdued. Mechanical pressure of the abdomen and compression of the anus have also proven serviceable under our observation. This is easily effected by compresses of cloth over the intestines and anus, kept in place by a broad T-bandage. With this bandage pressure can be made, and the peristaltic movements of the intestines modified, if not controlled, even when it is absolutely necessary to allow the occasional escape of the contents of the over-distended lower bowels by the temporary removal of the anal compress. The foregoing, with the judicious use of ice internally and externally, and *positive inhibition of all* distilled alcoholic liquors, should always claim careful attention, whatever other remedies are used in the algid state or stage of collapse of cholera.

The writer is very positive he has seen *decided injury* from the use of brandy and whisky in the algid stage of cholera, and cannot recall in his past experience a single instance in which *any* of the distilled preparations of alcohol afforded more than momentary benefit in this condition or stage of the disease.

DEVELOPMENT OF FEMININE CHARACTER.

If we trace the genesis of human character, by considering the conditions of existence through which the human race passed in early barbaric times and during civilization, we shall see that the weaker sex has naturally acquired certain mental traits by its dealings with the stronger. In the course of the struggles for existence among wild tribes, those tribes survived in which the men were not only powerful and courageous but aggressive, unscrupulous, intensely egotistic. Necessarily, then, the men of the conquering races which gave origin to the civilized races, were men in whom the brutal characteristics were dominant; and necessarily the women of such races, having to deal with brutal men, prospered in proportion as they possessed, or acquired, fit adjustments of nature. How were women, unable by strength to hold their own, otherwise enabled to hold their own? Several mental traits helped them to do this.

We may set down, first, the ability to please, and the concomitant love of approbation. Clearly, other things equal, among women living at the mercy of men, those who succeeded most in pleasing would be the most likely to survive and leave posterity. And (recognizing the predominant descent of qualities on the same side) this, acting on successive generations, tended to establish, as a feminine trait, a special solicitude to be approved, and an aptitude of manner to this end.

Similarly, the wives of merciless savages must, other things equal, have prospered in proportion to their powers of disguising their feelings. Women who betrayed the state of antagonism produced in them by ill-treatment would be less likely to survive and leave offspring than those who concealed their antagonism; and hence, by inheritance and selection, a growth of this trait proportionate to the requirement. In some cases, again, the arts of persuasion enabled women to protect themselves, and by implication their offspring, where, in the absence of such arts, they would have disappeared early, or would have reared fewer children. One further ability may be named as likely to be cultivated and established—the ability to distinguish quickly the passing feelings of those around. In barbarous times, a woman who could, from a movement, tone of voice, or expression of face, instantly detect in her savage husband the passion that was rising, would be likely to escape dangers run into by a woman less skilled in interpreting the natural language of feeling. Hence, from the perpetual exercise of this power, and the survival of those having most of it, we may infer its establishment as a feminine faculty. Ordinarily, this feminine faculty, showing itself in an aptitude for guessing the state of mind through the external signs, ends simply in intuition formed without assignable reasons; but when, as happens in rare cases, there is joined with it skill in psychological analysis, there results an extremely remarkable ability to interpret the mental states of others. Of this ability we have a living example never hitherto paralleled among women, and in but few, if any, cases exceeded among men. * * *

That men and women are mentally alike, is as untrue as that they are alike bodily. Just as certainly as they have physical differences which are related to the respective parts they play in the maintenance of the race, so certainly have they psychical differences, similarly related to their respective shares in the rearing and protection of offspring. To suppose that along with the unlikenesses between their parental activities there do not go unlikenesses of mental faculties, is to suppose that here alone in all Nature there is no adjustment of special powers to special functions.

Two classes of differences exist between the psychical, as between the physical, structures of men and women, which are both determined by this same fundamental need—adaptation to the paternal and maternal duties. The first set of differences is that which results from a somewhat earlier arrest of individual evolution in women than in men, necessitated by the reservation of vital power to meet the cost of reproduction. Whereas, in man, individual evolution continues until the physiological cost of self-maintenance very nearly balances what nutrition supplies, in woman, an arrest of individual development takes place while

there is yet a considerable margin of nutrition : otherwise there could be no offspring. Hence the fact that girls come earlier to maturity than boys. Hence, too, the chief contrasts in bodily form : the masculine figure being distinguished from the feminine by the greater relative sizes of the parts which carry on external actions and entail physiological cost—the limbs, and those thoracic viscera which their activity immediately taxes. And hence, too, the physiological truth that, throughout their lives, but especially during the child-bearing age, women exhale smaller quantities of carbonic acid, relatively to their weights, than men do ; showing that the evolution of energy is relatively less as well as absolutely less. This rather earlier cessation of individual evolution thus necessitated, showing itself in a rather smaller growth of the nervo-muscular system, so that both the limbs which act and the brain which makes them act are somewhat less, has two results on the mind. The mental manifestations have somewhat less of general power or massiveness ; and beyond this there is a perceptible falling short in those two faculties, intellectual and emotional, which are the latest products of human evolution—the power of abstract reasoning and that most abstract of the emotions, the sentiment of justice—the sentiment which regulates conduct irrespective of personal attachments and the likes or dislikes felt for individuals.—HERBERT SPENCER, in *Popular Science Monthly* for November.

MEDICAL ELECTRICITY.

MESSRS. EDITORS :—With your permission I desire to say a few words by way of reply to a communication on the subject of medical electricity of your correspondent, Rusticus, who seems equally anxious to get information himself and to impart it to others. Electricity is a science of vast depth and intricacy, and more especially that part of it which belong to animal structures ; in proof of which I will mention that even Carpenter, accustomed to those profound researches we admire in his *Physiology*, confesses himself unable to follow Du Bois-Reymond to the full extent of those investigations he has made on this subject. Difficult, indeed, would be the practice of medical electricity, and confined to the hands of very few, if one had to go to the very bottom of inquiries like these, and might not venture, for example, to send a current from his battery through a nerve until he had first considered how this artificial influence would affect certain numberless electrical circles moving spontaneously within the infinitesimal molecules of the part itself, each pair of which becomes peripolar or depolar, as the nerve is in a state of action or at rest. I question, indeed, whether even those who amuse

themselves with such minute speculations, bring them into actual practice, or are not rather guided by those external symptoms, and that ordinary experience, equally within the reach of my friend Rusticus and the great multitude of other practitioners.

Haud inexpertus loquor: When, some years since, my attention was first directed to electricity as a means of curing disease, the instruments themselves, I confess, presented 'a difficulty at the very outset; they were new to me, and, as a matter of consequence, not understood. I then had recourse to books, which began with abstract, half metaphysical discussion, extending far into the volume before any practical matter was approached. This mass of introductory matter I do not, by any means, mean to say was useless; I would only assert that it was too much labored and remote for a beginner, and that all the essential points are comparatively simple, and such as may be mastered without any unusual share of difficulty. Since this time, many good works on the subject have been written, as those of Althaus, Reynolds, Tibbits, Hamilton, Meyer, etc., and many admirable machines constructed, as those of Remak, Fromhold, Meyer, and the Galvano-Faradic Manufacturing Co. of New York; the latter are those I now use, as being at once simple and efficacious.

While making these remarks, I am not at all to be understood as if desirous of defending those itinerant and other electricians whom Rusticus so justly decries; on the contrary, such ignorant pretenders deserve no countenance, and, as in the instance of the lady with her "primary" and "secondary" who brought on hemiplegia, should be prosecuted and punished by law. All I would advance, is, that the practice of electricity is open to every physician; that the success with which he uses it will depend mainly on his knowledge of disease, and that there is no secret in this any more than in any other department of medical science. While I would caution the public against the quack, local, itinerant, male and female, I would also remind the physician of his own ability, and encourage him to make use of electricity himself, if for no other motive than to take it out of the hands of the uneducated. It would, indeed, be a strange thing to see the country overrun with impostors who carry a "box" filled with mischief, like that of Pandora, while a medical man is obliged to look on or send his patient to a specialist in Boston, New York, or elsewhere.

But I fear, gentlemen, that I have taken up too much of your valuable space, and must conclude somewhat abruptly by advising Rusticus, and others who desire to secure to their patients the benefits of electricity, to procure some such instructive books and some such effective instruments as those above spoken of, when, in a short time, with a little study and a little practice, they may thrust out the empiric, vindicate their own claims, and not trouble the specialist. I have the honor to be yours,

—*Boston Medical Journal*.

URBANUS.

MEDIAL GLEANINGS.

ATROPIA AND SALIVATION.—Dr. Wilhelm Ebstein (Breslau) concludes a paper on this subject in the *Berlin Med. Wochenschrift*, as follows:

A work by my friend, Paul Grutzner, in Pflüger's *Archiv*, furnishes the proof that irritation of the medulla oblongata is followed by a marked increase of salivary secretion, which is checked on the side in which the chorda tympani and sympathetic have been divided; on the other hand, it continues on the other side, where both or one of these nerves remain intact; so that the assumption of a salivary centre in the spinal cord is justifiable. * * *

Of far greater practical importance is the therapeutic value of atropia in the treatment of salivation as experimental investigations have so clearly indicated. We have, in atropia, a means which markedly relieves the distress of salivation. When I give my patient a hypodermic injection of 0.0016 atropia, I assure him a perfect night's rest, which would be else impossible on his constantly saturated pillow.—*In salivation, atropia is the proper narcotic.*

CHRONIC TETANUS TREATED BY EXCISION OF CICATRIX.—Mr. Annandale gives a short account of the following case: A boy, aged 16, wounded his foot. On the 9th day afterwards, trismus came on, and he came into hospital on the sixteenth day after the wound, on the seventh of the trismus. There was no laryngeal symptom, nor opisthotonos. The patient swallowed well; his bowels were freely opened by croton oil, and for three days he was kept under the influence of small doses of morphia. For two days more he had ninety grains of chloral daily. On the twelfth day of the tetanus, slight contraction of the muscles of the limb began. On the next day, the cicatrix, and a piece of nerve, which appeared congested, were cut out, and all medical treatment stopped. There was no improvement for two days; but on the third day, or sixteenth of the disease, he began to improve, and went out soon, quite well.—*British Medical Journal.*

A POST-MORTEM examination of a person who died from excessive smoking would not probably reveal much beyond an extremely flaccid heart and slightly congested brain.—*Lancet.*

TWO CASES OF TETANUS CURED BY NEUROTOMY.—The following cases are recorded in the *Gazette Medica Italiana Provincie Venete*, by Drs. Busi and Marinelli:

Case I.—Traumatic crushing of the two last toes of the right foot; on the eighth day, after appropriate treatment and various incidents, the fourth toe was healing nicely, but the fifth one presented a nasty-looking flap, with extraordinary pain on pressure,

extending all along the sciatic; disarticulation of the toe refused by patient; useless employment of topical means and subcutaneous injections of morphia; discovery by Prof. Riggoli of a whitish filament in the wound, most painful on touch; excision of the filament; subsidence of symptoms; entire cure on the sixteenth day.

Case II.—Discharge of a gun in the left fore-arm. Lesion of muscles; only one hole through which the shot had passed. On the eighth day, full of eschar, serious hemorrhage from the brachial artery and ligature. Tenth day, abscess in the articular fold of the elbow and fall of ligature, after which the patient was doing better, with only a fistula opening, when tetanus suddenly appeared in the arm, and rapidly extended to the entire thorax. Excision of the musculo-cutaneous nervous ramulus. Complete cure three days after.—*The London Lancet.*

SUCCESSFUL EXTIRPATION OF A KIDNEY.—The *Medical Times*, July 26th, contains a condensed translation of Professor Simon's operation for removal of a kidney. The patient was a woman forty-six years old. The cause of the operation was the discharge of all the secretion of the left-kidney through fistulas in the abdominal walls and vagina. This discharge was the result of a division of the left ureter during an operation for ovariectomy some eighteen months previous. Every attempt to furnish relief without extirpation of the kidney failed. The operation is described thus: A cut through the skin four inches long was made perpendicularly, on the outer side of the sacro-lumbalis muscle, beginning at the eleventh rib, and carried down to the space between the twelfth rib and edge of the sacro-lumbalis muscle. The cut being deepened, the gland is reached lying in its fatty bed. The gland is then separated from its surroundings, and the parts entering the hilus are ligated. The wound healed kindly, but the ligatures did not come away till the sixth month. But long before this the patient left her bed, and performed the duties of nurse in hospital. Two years after the operation she still enjoyed uninterrupted good health. Accurate observations made on the urine during recovery proved that the extirpation of one kidney has no perceptible influence on the health of the patient. In experiments made upon dogs, Professor Simon found a vicarious growth of the remaining kidney beginning a very short time after extirpation.

CONSUMPTION OF TOBACCO.—Undoubtedly the consumption of tobacco among us is terribly on the increase. The amount raised in the United States in 1840 was 219,000,000 lbs.; while that in 1860 was 428,000,000 lbs.; and the production in the world at large was estimated at 1,000,000,000 lbs. The export from the United States in 1860 was 150,000,000 lbs., while the import from Cuba was probably 2,000,000 lbs., thus making our con-

sumption in 1860, 280,000,000 lbs., or, assuming our population then at 36,000,000, about $7\frac{1}{2}$ lbs. per annum to every man, woman, and child!—*Philadelphia Medical Times*.

FILTH WITHOUT FEVER.—Dr. Dudgeon, who has had abundant opportunities for observing the sanitary condition of Pekin, China, in connection with the history of cholera among the Chinese, reports as follows concerning that city:

Dr. Dudgeon refers to the filthy condition of that city—a condition of which, he says, people in the West can form no notion, for the smells defy description—in regard to the wonderful immunity of the inhabitants from fevers. If bad smells alone created fevers there ought to be no immunity from these diseases. The police and scavengers are among the healthiest and most robust of the population, and the beggars who congregate in the very centers of pollution, contesting with the dogs priority of claim to the refuse of the dunghills, survive and flourish, and most of them—at least the strictly professional ones—look fat and sleek. The sanitary legislation of Western cities, he says, is based upon the one idea that disagreeable and offensive odors are necessarily deleterious to health. The condition and mortality of Pekin, I think, would seem rather to explode this belief. The removal of night soil may be considered most destructive to health; yet here, there being no system for carrying off sewerage or scouring drains, the entire night-soil of the city is transported during the day, through the most crowded and sometimes narrow thoroughfares. We are obliged to pass certain localities at all times with closed nostrils, while hundreds of people continually live in and around and above these open cess-pools, and yet manage to look well and healthy. Many diseases prevail here, as in the West, without the agency of this reputed cause, noxious odors; and the causes exist at all times here without producing such diseases.—*Lancel*.

SOLUTION OF CAMPHOR IN ERYSIPELAS.—In the *Gazetta Medica da Bahia* it is said that a few drops of a solution of equal parts of gum camphor and ether, applied from time to time to an erysipelatous surface will, in the majority of cases, effect a cure.

Book Notices.

ON THE MECHANICAL TREATMENT AND DISEASES OF THE HIP-JOINT.
By CHARLES FAYETTE TAYLOR, M. D., Surgeon to the New York Orthopedic Dispensary and Hospital, etc. etc. New York: Wm. Wood & Co. Cincinnati: George E. Stevens & Co. Svo. Pp. 62. 1873.

The author states that this little monograph is intended to be just

what its name implies—an exposition of the “Mechanical Treatment of Diseases of the Hip-Joint”—and nothing more.

Dr. Taylor regards diseases of the hip-joint, however produced, as essentially traumatic in their character. He considers that the opinion of many that they have their origin in the constitution is not according to clinical facts. He believes that it is *pressure*, or motion *under pressure*, which is the destructive agent in disease of the hip-joint. Hence we derive two prime indications for mechanical treatment:—

1st. To relieve the pressure in the joint due to muscular contraction, by temporarily destroying the muscular irritability and contractility.

2nd. To protect the joint from weight and concussion.

The indication for arresting motion in the joint, which is well met by the gypsum bandage and similar expedients, pertains only to a condition of rigid muscular contraction, and consequent increased constant pressure in the joint. But no such necessity exists after the muscular rigidity has been overcome to the degree of entirely removing all pressure within the joint.

The author's mode of treatment is the employment of such mechanical apparatus as will entirely relieve the joint of all pressure. He, therefore, puts the muscles upon the stretch *and stretches them until they yield*. And he states they must be kept stretched and relaxed till the disease in the joint is overcome. He has invented an apparatus for the purpose, which he describes.

He reports a number of cases in which his treatment was entirely successful.

A TREATISE ON THE DISEASES OF THE EAR. By D. B. ST. JOHN ROOSA, M. A., M. D., Prof. of Disease of the Eye and Ear in the University of the city of New York, etc. etc. Illustrated by wood engravings and chromo-lithographs. 8vo. Pp. 533. New York: Wm. Wood & Co. Cincinnati: R. Clarke & Co.

This work is intended, as the author states, to be a guide to those who wish to treat the diseases of the ear. Being founded upon his own experience in the observation and treatment of more than 3800 cases, with the experience of other practitioners both at home and abroad. The first chapter is devoted to a short sketch of the progress of otology. At the close of this chapter and at the end of each Anatomical Section, the various authorities consulted are given in full, so that anyone desiring to pursue any special subjects further will be thus aided by knowing what authors to examine.

The work is divided into four parts, containing in all twenty chapters. Part first is devoted to the anatomy of the auricle and external auditory canal; mode of examining aural patients and the diseases of auricle and external auditory canal. Part second to anatomy of the middle ear; diseases and the consequences. Part third to the anatomy and diseases of the internal ear. Part four: deaf-mutism, and hearing trumpets.

The work is written in a clear and interesting style, and is not only valuable to the specialist, but should be read by every practitioner who has anything to do with diseases of the ear. D. D. B.

LECTURES ON DISEASES AND INJURIES OF THE EAR. Delivered at St. George's Hospital, by W. B. DALBY, F. R. C. S., Aural Surgeon to the Hospital. With twenty-one illustrations. 12mo. Pp. 224. Philadelphia: Lindsay & Blakiston. Cincinnati: R. Clarke & Co. 1873.

An abstract of these lectures appeared in the *Lancet* during the latter

half of the year 1872. and with some additions and alterations they are now published as originally delivered.

In re-publishing the lectures an attempt has been made to describe, as shortly as possible, the pathology and symptoms of diseases of the ear, and in directing attention to the treatment of these affections to place before the reader the general results to be expected from remedial measures.

The course commences with a description of the external ear, its malformations, examination of external auditory meatus, foreign bodies and cerumen in the ear, and passes on to the consideration of the various affections of the meatus, obstruction of the eustachian tube, method of inflating tympanum, etc. etc. Then we have treated catarrh of the tympanum, inflammation of tympanic membrane, cause and treatment of perforation. In the seventh lecture we have considered facial paralysis, polypus of the ear, structure of polypi, modes of removal, subsequent treatment, etc. The subsequent lectures, there being eleven in all, are devoted to the consideration of cerebral abscess, mode of propagation, meningitis, thrombosis, pyemia, tinnitus, deafness after shock, after mumps, Meniere's disease, deafness from inherited syphilis, nervous affection of auditory apparatus, causes of deaf-mutism, chief defects found in ears of deaf mutes, etc. etc.

The work, though small, forms quite a complete treatise on diseases and injuries of the ear, a class of affections but little understood by physicians generally, and is worthy of careful study. The author adopting the conversational style makes his instruction more easily comprehended.

A TREATISE ON DISEASES OF THE EYE. By J. SOELBERG WELLS, F. R. C. S., Prof. of Ophthalmology in King's College, London, etc. etc. Second American from the third English edition, with additions. Illustrated with 248 engravings on wood, and six colored plates. Together with selections from the test-types of Prof. E. Jaeger and Dr. H. Snellen. Svo. Pp. 836. 1873. Philadelphia: Henry C. Lea. Cincinnati: R. Clarke & Co.

The marked success of this work in England and America, as shown in the demand for successive editions, and its translation into both French and German, are sufficient evidence that it has supplied a want generally felt by the profession of a complete but compendious view of modern ophthalmology. As before, the present edition has been superintended by Dr. I. Minis Hays, who has introduced a considerable number of illustrations, and has added selections from the test-types of Jaeger and of Snellen, both of which are referred to in the text, and are recommended for use by the author. He has likewise inserted a few notes, though the very recent appearance of the third English edition has left little of novelty which had not received the attention of the author.

The author has endeavored to enter fully into all the most important advances which have been lately made in ophthalmic science; and while he has done this he has steadily kept one purpose in view, viz: to make it as practicable and comprehensive as possible, and has, therefore, entered at length into an explanation of those subjects which he has found to be particularly difficult to the beginner. He has, on purpose, occasionally repeated important points in diagnosis and treatment, in order to render each article, to a certain extent, complete in itself, so as to obviate the necessity of the reader having constantly to refer to other portions of the book for explanation or information.

We have no hesitation in pronouncing the work one of the best of those which treat of the diseases of the eye with which we are acquainted. Every physician will find in it a treasury of useful knowledge, which he will be constantly called upon to make use of in his

practice. As a text-book for students we regard it as having no superior; for while not overloaded with the opinions of others, it is full in its details, derived from the author's own very large experience.

LACERATIONS OF THE FEMALE PERINEUM AND VESICO-VAGINAL FISTULA, THEIR HISTORY AND TREATMENT. By D. HAYES AGNEW, M. D., Prof. of Surgery in the University of Pennsylvania. With numerous illustrations. Philadelphia: Lindsay & Blakiston. Cincinnati: R. Clarke & Co. 8vo. Pp. 141. 1873.

The subjects of the present volume appeared several years ago; the first in the *Pennsylvania Hospital Reports*, and the second in the pages of the *Medical and Surgical Reporter*. As applications are constantly received for these papers, the writer has deemed it proper to place them before the profession in their present form; and we have no doubt the profession will be gratified that he has done so.

Although the work is not large, yet the reader will find it quite complete. The first part treats of laceration of the female perineum. First its history is described and its anatomy given. Then the time for the operation and the preparation of the patient are discussed; after which is described at length the operation, with reports of cases which tend to throw light upon the subject. This part is illustrated by a number of excellent woodcuts.

The second and larger part of the work is devoted to vesico-vaginal fistula—its history and treatment. We have treated at length the causes of the accident; classification; form, size, condition; diagnosis; complications; treatment; and all that concerns the affection. Dr. Sims' operation is described, illustrated by woodcuts; also Drs. Boze-man's, Simpson's, J. Hunter's, McGuire's, the author's, and those of other operators.

We regard the work as one of the most valuable monographs upon the subject of which it treats that has been issued from the press for a long time.

Editorial.

YELLOW FEVER.—As our readers are aware, the yellow fever has been prevailing as a fearful scourge in Memphis and Shreveport. It has truly been said that the famine in Ireland, the plague of Marseilles, the burning of Atlanta, and the history of Richmond after its fall, are literally nothing to the scenes that have occurred in the stricken cities of Memphis and Shreveport for six weeks or more. We are happy to say, however, at the present time of writing, in consequence of the numerous heavy frosts that have occurred, the plague seems to be rapidly subsiding.

The following history of the disease, which we take from a Memphis paper, will be found of interest. It will also prove of value for reference in the future:—

“The yellow fever has existed in Memphis since the 10th of August; for five weeks it has been epidemic, and not less than 1200 persons have died from the disease. As early as the 20th of August there were several deaths each day, in and about Happy Hollow, from a malady since pronounced yellow fever. On the 13th of September the then Board of Health announced that about 30 deaths had occurred, though there is evidence that the number, dating from August 11th or 12th, was much larger.

“By September 13th the disease had made considerable headway, the official report for the week ending Saturday, 21st, showing a yellow

fever mortality of 128. During the week ending the 28th, the fever mortality dropped to 98, but it increased to 146 during the week ending October 4th. The first frosts came on the 6th and 7th inst., and that week the epidemic reached its climax, for during the seven days closing Saturday, 11th inst., the fever mortality increased to 280, its highest point.

"A few days later these frosts, immediately succeeded by lighter ones, slightly checked the progress of the disease; for the week's report ending Saturday, 18th, showed 252 deaths from the fever—a decrease of 28, assuming the previous week's report to be correct, though up to that time a large number, which should have been credited to yellow fever, was reported "unknown," owing to imperfections in the undertakers' returns. Our opinion is that, instead of 280 for the week alluded to, the deaths from fever were not less than 340, the total from all causes being 384, thus making the decrease 88 instead of 28.

"On Monday, Tuesday, and Friday mornings of the past week there were black frosts, the last two of which made ice, the mercury Friday morning falling to 32 deg., the freezing point. Although the only immediate effect of these heavy frosts has been a slight increase in the death rate, owing to the sudden change to cool weather, we are still able to report another marked decrease in the total mortality. During the week ending yesterday, 25th, there were 162 deaths from yellow fever, against 252 last week—a decrease of 90.

"On the 14th the *Avalanche* gave utterance to the belief that the epidemic had reached its climax, and that 'henceforth it will abate, slowly, perhaps, but steadily and surely.' And we said on the 20th:—'To-morrow's published report may show for to-day a slight increase, owing to the sudden change from warm to cold weather during the past thirty-six hours; but at 11 o'clock last night the mercury reached 46 deg., the frost point, with prospects of descending below 36 deg., and the positive assurance of a killing black frost this morning. Our readers may now feel assured that henceforth the decrease in the mortality and the new cases will be rapid as was the increase two weeks ago. The backbone of the yellow fever was broken six days ago. Whatever the fluctuations in the death rate during the next few days, the week's total, to be printed next Sunday, will hardly exceed 160. We doubt if it will reach that point, as from the majority of the sick there are favorable reports, many are convalescing daily, and the number of new cases is daily decreasing.'

"The week's total, as shown by the official report, is 162, only two more than our estimate. The facts sustain our assertion of the 14th, that the epidemic had reached its climax; for even before the good effects of the late and only 'black frost' can be felt, the disease is abating. Since the week ending the 11th, when 280 (or 340) was reached, there has been a steady abatement, first to 252 on the 18th, and 162 on the 25th. The work of the 'black frost' is still to be performed.

"Assuming the Howard Association to be correct—and they will be found so—the fever is now rapidly abating. The number of new cases, as reported for the five days ending last night, was respectively, 54, 44, 39, 21, and 18—a rapid decrease in the aggregate. Hereafter the fever will develop only in those whose systems were a week ago filled with poison. We will hear of few new cases in future, unless this poison be harder to kill than any ever before known in yellow fever. Just now the daily deaths about offset the daily list of new cases, leaving the convalescents to show the progress of the abatement. During the three days ending last night, per Howard Association reports, the convalescents discharged or ready for discharge were respectively, 117, 160, 107—total 384, or a daily average of 128. Put these facts and the 'black frosts' together. They need no comment."

From an article in another paper of later date, we quote:—

"The situation to-day is more favorable than for weeks past; and yet, out of a population of 55,000, 12,000 of which is a large estimate for those remaining, 1500 have died; 1200 are now sick; over 2000 families are drawing rations from the Citizen's Relief Commissary; and 1200 orphans are in the different asylums."

EXT. PICUS PORTEANA.—Did our readers ever hear of this remedy? Some of them probably have; others probably have not, and for the benefit of the latter we will tell what we know about it, and what has resulted from its discovery by Dr. J. C. BECK.

It seems that one day a bottle was handed to E. S. WAYNE, of this city, proprietor of *Wayne's Diuretic Mixture*, which he himself advertises as "the greatest boon ever conferred upon suffering humanity," and as "beyond comparison, the greatest Medical Discovery of the Age." After examining it closely, as he relates in the *Lancet and Observer* of September, he discovered the following label and directions:—

Bottle, No. 1.

EXT. PICUS PORTEANA.

Take a teaspoonful three or four times a day.

PRESCRIBED BY DR. J. C. BECK,

No. 112 John Street, near Fourth,

Ledger, 1873.

CINCINNATI, O.

Page 178.

You will use the bottles as they are numbered, using all of No. 1 before opening No. 2, and using all of No. 2 before opening No. 3 and so on. Be careful to follow the directions, and never taking more than ordered; but you take less if you can do so and feel well.

After quoting this label exactly as we have done, together with the directions, the discoverer "of the greatest boon ever conferred upon suffering humanity," which is in the form of a "*Diuretic Mixture*," proceeds to intimate that the aforesaid *Ext. Picus Porteana*, claiming to be a cure for the opium habit, is a *humbug*. He says that having analyzed it he found it to be "merely a strong tincture of opium slightly disguised in taste and odor by some other substance, and that it contains 8.8 grains of pure morphia in the ounce—equal to about 11.7 grains of sulphate of morphia, and about double the strength of tincture of opium of the U. S. P. Comment is unnecessary." That is, it is a fraud upon those who are induced to make use of it to be freed from the habit of opium eating.

Now, under ordinary circumstances, a gentleman who had made such progress in chemistry as to be able to compound a "*Diuretic Mixture*," which "had it been known in the earlier ages of the world the cures it has performed would have been regarded as miracles," would be considered entirely competent to chemically analyze *Ext. Picus Porteana*. And the fact, too, that last spring he had conferred upon him the honorary degree of M. D. by the Medical College of Ohio, would lead to the same view. But Dr. J. C. Beck, who also has been the recipient of the degree of M. D. from the Medical College of Ohio, states that "*there is not a particle of opium, in any form, in my remedy*." Further, he proceeds to speak in great contempt of *Doctor Wayne's* efforts to create the impression that he (Beck) is a charlatan: and says that the "exquisite grace of this will be understood by those who know that he makes his livelihood mainly as an inventor, compounder

and proprietor of patent medicines. By extensively advertising his various nostrums, they already rival in notoriety Dr. Kerr's Great System Renovator, Newton's Incomparable Pile Driver, and other similar preparations; and he does not despair of eventually reaching a distinction as lofty as that of Dr. Brandreth or Mrs. Winslow."

We say that ordinarily, in consequence of his immortal discovery in his "Diuretic Mixture," and the honors he has had bestowed upon him seemingly on account of it (for we know no other reason for the degree of M. D. being conferred upon him, never having laid any claim to being a physician) we would have the utmost confidence in *Doctor Wayne's* ability to analyze the celebrated *Ext. Picus Porteana*; but under the circumstances our mind is thrown into most distressing doubt. Here are two gentlemen, both of whom have had their qualifications indorsed by the "Mother of Medical Colleges of the West," each one claiming to have discovered a great boon to the human family, have fallen to quarreling in the *Lancet and Observer*, stigmatizing one another as charlatans, and disparaging one another's discoveries in medicine. This is not as it should be. We think the Medical College of Ohio owes it to herself (that is the faculty thereof) to interfere; and while it protects the immortal "Diuretic Mixture," that "greatest boon," from the unjustifiable attacks of Beck, it should also demonstrate that *Picus Porteana* is the *genuine thing* and no mistake.

We do not regard it as commendable on the part of the *Lancet and Observer* to publish the assaults of these eminent gentlemen in medicine on one another's discoveries. It certainly has no higher motive than to injure the Medical College of Ohio by holding out the idea that it graduates charlatans. The *Clinic* would be justified in cutting it off from its exchange list; and we will expect soon to hear that it has done so.

SCHIECK'S OBJECTIVES.—We take the following from the *Journal of the Quekett Microscopical Club*:

"We regret an omission in our last issue, which occurred inadvertently, no report having been furnished to us. It was to notice the new pattern 1-40th immersion lens, by Schieck, of Berlin, which attracted so much attention at our meeting held on the 28th of June last. We may here mention that it was greatly admired for its remarkable abundance of light, perfect flatness of field, and brilliancy of definition.

"The objects used with it were (1) *Surirella Gemma*, the longitudinal and transverse lines of which it showed with the utmost distinctness; (2) *Navicula Cuspidata*, the lines on which were beautifully resolved into 'dots.' Some, on the other hand, objected to the presence of color—a faint ruby tint—which seemed to be associated with its best performances. This, however, is characteristic of almost all German lenses, and is owing to the preponderance generally given by the German opticians, in their immersion combinations, to the crown glass over the flint glass. Mr. Schieck, we believe, was, till within the last two years, a pupil of the celebrated Dr. E. Hartnack."

A WORD ON NATURAL HISTORY.—Natural History is so intimately associated with medical literature, that very many eminent physicians of Europe and America have devoted much of their time to the advancement of this department of science, and have become distinguished in the different branches on which they have written. Geology, conchology, and so on, have been vastly benefitted by their energy and ability.

Medical men are now expected to be more or less versed in the literature of the subject, and but few of us escape questions of patients and friends in regard to the birds, insects, shells, fossils, and, in fact, all

that surrounds us. This should be because we are more intimately associated with all classes of people than gentlemen of other professions, and it is certainly greatly to our advantage to be able to instruct them about every thing that so nearly concerns them in the pleasures of life.

There are those who find pleasure in paintings, others in music, but it is to those especially who take pleasure in a cabinet of Natural History that we wish to speak. We would say, Gentlemen, devote a portion of your time, by way of recreation, to the collection of such objects of Natural History as surround you; build up a cabinet for the edification of yourselves, family, and friends, and our word for it, you will never regret the time thus employed.

If you desire to exchange fossils or recent shells, we would be glad to recommend to you Dr. C. A. MILLER, S. W. corner of Court and Baymiller streets, Cincinnati, Ohio. Write to him, and find pleasure and profit in your exchange. For those fossils and recent shells of which you have a larger number than you care about preserving, he will send you those of which you have no specimens.

SIMPLE METHOD OF TESTING PEPSINE.—Boil an egg for an hour, and cut a portion of the white into the thinnest possible slices. Take a two-ounce, wide-mouthed bottle, and introduce into it 77 grains (5 grammes) of the sliced white of egg, $1\frac{1}{2}$ gr. of pepsine, 4 minims of strong hydrochloric acid, and 420 minims of distilled water. Place the bottle in a water bath, and keep it for four hours at a temperature of 100 deg. Fahr. A higher temperature [not exceeding 120 deg.] causes more rapid digestion; but it is, perhaps, better to work at about the temperature of the stomach. At the end of the experiment all the albumen should have been dissolved, nothing remaining but minute quantities of fibrous or membranous matters.

DR. EDWARD WARREN, late professor in the Baltimore College of Physicians and Surgeons, has recently been appointed by the Khedive of Egypt to the position of Staff-Surgeon in his army, at a salary of \$3000 per annum, with the rank of colonel, and with the privilege of practising medicine in the city of Cairo.

MICROSCOPICAL EXAMINATIONS OF THE BLOOD OF CHOLERA PATIENTS AND THEIR DEJECTIONS.—With praiseworthy diligence, pathologists carry on their investigations touching the characters of the blood of patients affected with cholera. Although up to this day such researches have not given us the actual clue to the cause of the disease, we should not be seized with discouragement. Perhaps certain changes special to the disease will be at no distant period discovered, and such discovery may lead to the adoption of a beneficial line of therapeutics. Among the indefatigable workers in minute pathological researches we should count M. Hayem, of Paris. He has lately subjected the blood of cholera patients to microscopical examination and thinks that he has not found characters peculiar to cholera. The increase of white corpuscles and the presence of small fragmented globules may be explained by the stasis of the blood in the algide period, and the decrease in the proportion of water. He has found a certain amount of viscosity in the blood-globules, for which he accounts by the presence of carbonic acid gas. As to the dejections, M. Hayem examined them to search for the proto-organisms which have been mentioned by certain authors. Several varieties of vibriones were found, but the same sorts were not traced in the dejections of different cholera patients, so that no special character can be attached to them. No actual cholera parasites have been found. In the post-mortem examinations the only organs constantly found in a pathological condition was the intestinal canal. The capil-

laries, the different layers of the epithelium, the sets of glands, and the villi, had all undergone certain changes, but the latter differed in no way from the changes observed in ordinary intestinal catarrh. M. Hayem, in bringing these facts before the Medical Society of Paris Hospitals (meeting of September 19th, 1873.), alluded to ipecacuanha as having been of great use during the premonitory stage. He also found that sulphuret of mercury, recommended by Murino, had arrested the rice-water dejections. The dose is fifteen grains every second hour. Murino, an Italian physician, thinks that the sulphuret destroys the parasites. Be this as it may, the good effects of this salt remain perfectly certain.

DEATH OF SIR HENRY HOLLAND.—Sir Henry Holland, the eminent English physician, whose death has been announced by cable, died just after completing his eighty-fifth year. He was born at Knutsford, Cheshire, October 27th, 1788, and received his medical degree at Edinburgh, in 1811. He was successful in his profession, which he practiced in London for over sixty years, and rose to the position of Physician in Ordinary to Prince Albert, and afterward to the Queen. He was made a Baronet in 1853. He was a clear-headed practitioner, and a cool but interested observer of whatever was going on in society. He was a great traveler, spending a part of every summer in rambles over Europe, and sometimes extending his tours much further. He visited Iceland and Asia and this country several times. In his Autobiographical Recollections, published about a year ago, he attributed the continuance of his good health at an advanced age to his active habits, and remarked that, old as he was, he always took the diagonal at street corners to get ahead the faster. He was the friend and acquaintance of many of the great men of the last half century, both at home and abroad. President Lincoln, with whom he became acquainted during the rebellion, was a special object of his admiration. In addition to the work above mentioned, Dr. Holland wrote *Medical Notes and Reflections*, *Mental Physiology*, and *Travels in Albania, Thessaly, etc.* He was twice married, his second wife being the daughter and biographer of the Rev. Sydney Smith. He survived her nearly seven years.

DEATH OF DR. G. W. BAYLESS.—We learn from the *American Practitioner* of October, that this gentleman, Professor of the Principles and Practice of Surgery in the University of Louisville, died September 11, of apoplexy. Prof. B. was held in high esteem by his colleagues and the profession of Louisville.

THE POPULAR SCIENCE MONTHLY for November is on our table, and has the following contents:

Liberal Education of the Nineteenth Century, by Prof. Wm. P. Atkinson; The Growth of Salmon, by C. E. Fryer (illustrated); Psychology of the Sexes, by Herbert Spencer; The Ringed Planet (illustrated); The Phenomena of Heredity, by Fernaud Papillon; The Shovel-nosed Shark, by Lady Verney (illustrated); Health and Comfort in House-Building, by Dr. John W. Hayward; Hypnotism in Animals, ii., by Prof. Joseph Cermak (illustrated); The Survival of Instincts, by Elias Lewis, Jr.; The Primary Concepts of Modern Physical Science, ii.—The Atomic Constitution of Matter as a Postulate of Thought, by J. B. Stallo; Sketch of Mr. J. N. Lockyer, F. R. S. (Portrait); Editor's Table; Literary Notices; Miscellany; Notes.

Published by D. Appleton & Co., New York. Price \$5 per annum. It is a magazine of the very highest order.

THE CINCINNATI MEDICAL NEWS.

VOL. II

CINCINNATI, DECEMBER, 1873.

No. 12.

ON DISEASES OF THE UTERUS.

Read before the Iowa State Medical Society, by H. T. CLEAVER,
M. D., Keokuk.

The two cases herewith reported occurring in my practice within the past year, and copied from the recorded notes of the same, together with some practical suggestions in relation thereto, are respectfully submitted as my report upon the diseases of the uterus.

The first, it will be observed, was a case of retroflexion, with cervical endometritis, dysmenorrhea, menorrhagia, leucorrhea, and sterility of over ten years duration, relieved by repositing the organ—sustaining it in position by the use of Hodge's lever pessary, and daily vaginal irrigation with infusion of hops, together with constitutional treatment with tonics.

The second case to which your attention is called is one of retroversion, with cervical hypertrophy, dysmenorrhea, and leucorrhea of about four months' duration, treated and relieved in the same manner, without resort to the caustic or alterative means generally recommended by the published authority upon disease of this organ of the character found in this case.

Mrs. E., aged 33 years, delicate habit, married eleven years, never pregnant; had some uterine ailment a few weeks after marriage, the nature of which is not distinctly remembered; but for the last four or five years has suffered from dysmenorrhea and leucorrhea; for the last few months from dysuria and rectal tenesmus, with intolerable pruritus vulva. Her menstrual returns have been for some months preceded by about twenty-four hours of agonizing uterine colic, after which, the

discharge appearing, comparative freedom from pain would be had during the following ten or twelve days of flowing, leaving her so prostrated that she would not be able to be on her feet only for a few days before the succeeding menstrual period.

She had been under the care of a good (but mistaken) physician, who confined her to her room, and the greater part of the time to her bed, for about four months in the spring and summer of 1867. While under treatment for "ulceration of the uterus" the applications to the diseased parts were of such a painful character, and with, to her and husband, no apparent benefit, that she concluded to try homeopathy.

After taking the little charts and pellets for some six months and not improving much, notwithstanding the assurance given by the disciple of Hahneman, that she "would soon be well," she despaired of recovery and concluded to let "nature take its course," and quietly resign herself to the idea of enduring as best she could that for which there seemed to be no remedy. From this time on to the date at which I was called, she was able to walk about the house and occasionally ride in a carriage, but always with great pain on the least movement.

May 14th, 1869, I was called to see the case, and obtained the foregoing history. Upon examination found retroflexion of the womb, os and fundus occupying nearly the same plane in pelvis; mucous membrane of os scarlet color for three or four lines distant from orifice, pouting or everted, but smooth, with a clear, tenacious, gelatinous discharge from cervical canal. Found it impracticable to introduce uterine sound with any degree of curvature, without most intense pain. Upon placing the patient in knee-breast posture, and with finger passed into rectum, succeeded in partially repositing uterus, but an expulsive effort as quickly drove it down to its former position. I introduced a Scattergood pessary, which held the fundus in about the same position to which I had elevated it with the finger in rectum; directed the vagina to be irrigated three times a day with infusion of hops.

May 18th. Found irritation in upper wall of vagina about meatus from too strong pressure by the pessary; withdrew Scattergood's and introduced a closed lever, with slight posterior curvature; continue irrigation, and take table-spoonful three times a day of elixir pyrophosphate of iron.

May 20th. Feels quite comfortable; can walk with greater comfort than for several years; no vaginal examination; continue treatment.

May 24th. Feels able to walk around out of doors; has been out on the porch to-day. Withdrew pessary and introduced one of greater curvature.

June 10th. Has passed menstrual period in comparative comfort; only lasted six days, a less time than any period for many months.

July 8th. Withdrew pessary and introduced one of greater curvature; passed a second menstrual period with profuse flow, but no suffering; there has been but little "whites" since June 10th; upon examination with speculum find in cervix and os but little redness or disease; womb nearly in natural position.

Sept. 20th. Has walked down to husband's place of business to-day, a distance of nearly half a mile, and called at my office to see me, saying that she considered herself about well, and wished to know how long she must wear the instrument. Has passed her menstrual period in comfort, and no leucorrhœa recently; has discontinued the vaginal irrigation.

Feb. 6th, 1870. Called to see me about the pessary being removed. Has missed three menstrual periods and thinks she is about three months gone in pregnancy. Is in better health than at any time since her marriage. Removed pessary.

Feb. 16th. Is in good health, and joyous at the prospect of becoming a mother.

Mrs. L., married, aged 38 years, of stout, full form and habit, mother of one daughter aged 20, and had one miscarriage at third month some two years after birth of daughter. Has enjoyed good health from that time up to within about four months of the date at which I was called to see her. In December, 1868, while engaged in domestic duties, injured herself by lifting a tub of water; was treated by her family physician about six weeks for some trouble designated by the very specific term, "strained back," without any relief, but rather augmented suffering and general impairment of health. Was then treated by another physician for ulceration of the womb, by caustic and other means for about a month, with no better result. A third, in the shape of a cancer doctor, was called, and treated her for cancer for a short time with no benefit, when it was con-

cluded to have me examine the case, which I did on April 22nd, 1869. Found the woman in bed, where she had been nearly the entire time since December, 1868,—unable to walk across the floor, or even bear her weight upon her limbs without support; stomach irritable, bowels constipated, constant sacral pain and rectal tenesmus, dysuria, dysmenorrhea, and leucorrhea. Upon touching, found cervix enlarged, and body of uterus pressing against rectum in retroverted condition. With speculum, discovered the os large, ragged, red, and presenting a granulated or strawberry appearance, with lips everted, and the whole exterior of the cervix of a scarlet hue. From the cervical canal was discharging a bloody, puriform material, which, as stated by patient, was very profuse for about a week before each menstrual period, but for a week after each menstruation was thin, milky, and not so profuse; cervical canal large, and admitted uterine sound readily.

By placing patient in the knee-elbow posture, repositd uterus with some trouble, but the slightest expulsive effort displaced the organ again. Directed the vagina to be irrigated with an infusion of hops twice or thrice daily, bowels to be kept free by a preparation of rhei and magnesia, which she had found sufficient for that purpose, and to bring her to Keokuk as soon as the roads were in a suitable condition.

April 29th. Patient brought to town on a bed in a spring wagon, and carried into a house; examined her and directed continuance of vaginal irrigation, and cathartic of solution tartro-citrate of soda.

April 30th. Repositd uterus and introduced one of "Hodge's open lever pessaries;" continued vaginal injections, and towel with cool water around the pelvis.

May 5th. Complains of pain behind and to left of symphysis pubis; found left branch of pessary pressing on seat of pain; removed and introduced a closed instrument.

May 13th. Upon examination with speculum found cervix looking better, but the os still presenting the red, swollen, and granular appearance; applied ferri persulphas, by blowing the powder from a glass tube upon the granular surface; irrigation to be resumed after three or four hours.

May 15th. Feels much better, and can walk about the room with but little discomfort; menstrual discharge commenced

this morning; discontinued hop infusion; vagina to be washed once a day with warm water during menstrual period.

May 24th. Has passed menstrual period without suffering, and is feeling much relieved; walks about the house with slight bearing-down feeling, but otherwise comfortable.

May 31st. Patient sent home to pursue same course of treatment after applying persulph. iron as before; os and cervix, though still large, looking much better.

June 27th. Patient returned. With the exception of some feeling of discomfort at the neck of bladder, is, in her own language "about as well as ever." Passed menstrual period with but very little pain; she attributes the uneasiness at neck of bladder to pressure by the pessary. Withdrew instrument and inserted one of greater anterior curvature. Found the cervix yet above its normal size, but the surface healthy in appearance; granular condition of margin of os entirely gone and mucous membrane healthy; but very slight discharge from cervical canal for some days. Continue the vaginal injections.

Oct. 25th. Patient returned to see me with the view of having pessary examined to see if all was right, and to know if she could not dispense with its use. Has been able to resume charge of household affairs and to perform much of the labor herself; has attended the State fair, and was able to endure walking and standing the greater part of the time during two days, and feels none the worse for it. Upon examination, find no evidence of disease, but advise her to continue the use of instrument, and irrigate the vagina with weak solution of sulphate of iron once a day to give tone to the parts.

Feb. 1st, 1870. Patient called to have pessary changed or dispense with its presence, as she thinks she can do without it. Find, upon examination, parts healthy, and no trouble at menstrual periods. Withdrew instrument and requested her to remain for a few days until she could determine whether she could do without it.

Feb. 3rd. Wants to go home, but. thinks she will be safer to have it introduced as she was more comfortable with than without it; introduced it again and sent patient home.

Taking the foregoing cases as examples of a method of treating diseases of the uterus, either depending upon or associate with displacement, it will be seen that I regard the maintained

reposition of the organ as a condition essential to success, and that instead of resorting to the means so commonly used in modifying the function of nutrition in an hypertrophied cervix by the employment of the scarificator, leeches, blisters, the cautery, or caustics, the same end is accomplished by temporary aid to the natural supports, and modifying the supply of the elements of nutrition by irrigating the parts with the medicated injections. I do not say that it is possible to dispense entirely with the implements of the heroic practice by discarding the knife, the cautery, or the numerous caustic preparations, but I do say that from an extensive employment of these remedies in years gone by, I have not that reverence for them that I once had, nor have I realized those benefits which seem to have attended their use by others; but on the other hand I have realized those good effects from the employment of means less objectionable to the patient, and more speedily and surely accomplished a cure among the multitude of means that have been used for the relief and cure of the uterine displacements and their complications. I know of none that have in any degree met the requirements so nearly as the various forms of the Hodge or lever pessary. There are others; the ring of Meigs and the spring of Scattergood that possess value in particular cases, but do not cover that wide range of applicability that characterizes the Hodge instrument. With it I have relieved cases that have apparently been amenable to no other known appliance, and in numerous cases radical cures have been realized where a palliative effect was only anticipated. The cases selected to illustrate the value of this curative as well as palliative implement are by no means isolated ones. That cases present themselves that prove rebellious to not only this, but every other known means of relief, is a matter of fact patent in the experience of every medical man who has had an extended practice in this department of professional business. I do not desire to bestow upon this or the other means employed in the cases cited unmerited praise, but I do desire that the burning and tortuing plan, so long pursued in the treatment of diseases of this organ, be dispensed with where means less repugnant to the patient, less troublesome to the practitioner, and more successful in results, may be tried.

By the method suggested by Scanzoni, of irrigating with

medicated or plain water, many of the inflammatory affections of the uterus and its appendages have, under my observation, yielded speedily, after resisting for months and years other methods of treatment,

As a local application to the diseased surface in that particular form of cervical endometritis, specified in the case reported, I regard the finely powdered per sulph. of iron as of more value than any other with which I have had experience. Two or three applications at intervals of six or eight days, and during the meantime the daily irrigation of the parts with either the douche of Scanzoni or a gallon of infusion of hops or *hydrastis canadensis*, applied with the Davison or Mattison self-syringe, with the uterus in position, will ordinarily in time accomplish what I have in vain expected from the seemingly more energetic treatment with the caustic applications, so generally recommended by the best works upon gynecology. My success in the management of nearly all the inflammatory affections of this organ has been much greater, as I use less frequently the acid nitrate of mercury, potass. com. calce., nitrate of silver, and kindred means, and adopt the agencies less heroic.

REPORT ON VITAL STATISTICS.

Read before the Kentucky State Medical Society by D. T. SMITH, M. D.

In view of the great importance of the subject, I regret exceedingly that the materials available have been found so meager that our report upon vital statistics must necessarily be of the most unsatisfactory character. The only collected statistics relating to Kentucky are those of the United States Census of 1870, and the volume of the census reports containing the results of inquiries into vital statistics I have not been able to obtain: and as these reports are soon to be given to the public in a tabulated form from the census bureau, it is natural to conclude that something more than their mere copying is expected by the society.

The whole subject of statistics, in all of its branches, is one which no Kentuckian, understanding the demands of the age, and having at heart the welfare and the honor of the State, and a

right concern for its future interests, can contemplate without feeling akin to shame. In this age of activity and progress, it has become necessary that every community should be fully informed as to the condition of all its interests and of all the influences affecting them. As no leading business-man could reasonably expect to succeed without a carefully-kept system of accounts; so it can be justly said no community or State can reasonably expect to be prosperous without a careful collection and comparison of statistics in every department of its industries; and important as vital statistics may be and are, they are comparatively valueless, and their collection impracticable, without carefully kept statistics in other departments.

True, to a certain extent, private business may be successfully pursued by men who follow in the steps of those who, by industry, care, and foresight, have paved the way and made its pursuit safe and profitable; and so a State may enjoy a certain degree of prosperity by adopting the rules arrived at by the wise counsels of another. But the chances are great that such measures as are by that course adopted, must be unsuited to its peculiar condition, and such community must fall short of the measure of self-development, which alone can lead to honor, prosperity, and power; and well is this exemplified in the condition of Kentucky.

Contemplating its condition, we find its agricultural interests in most part deplorably neglected; its soil washing away, or being worn into utter unproductiveness; its educational system, though much improved, still in a most deplorable state of backwardness. Our State abounding in the richest minerals, we spend the gleanings of our tired soil for imports of the very class that should be to us a source of munificent income. Arts and manufactures are shamefully languishing, while in the higher walks of statesmanship and learning the sons of Kentucky are retreating from the high position of leadership once cheerfully accorded them to a position painfully subordinate.

Only a single daily paper in the State has a creditable circulation; while of the agricultural papers not one, perhaps, but is kept up as an amateur publication, the editors being compelled to look for support outside of the income derived from the publishing of their journals. To become a prosperous people we must first become a reading, thinking, fact-observing, truth-

seeking, and progressive people. Had we followed the example even of pagan China, and kept the soil of the State at the standard of its original fertility, which could easily have been done, every year our productions would be double the value what they now are, and all the interest depending in any way upon agriculture would have been benefited in the same ratio.

As regards the prolongation of life and the preservation of health, had all the benefits been obtained which the best hygiene and the most improved medical skill are capable of yielding, a far greater amount even in money value could have been economized than any government in the world pays for the diffusion of general knowledge.

Aside from the census of population, nearly all the statistical knowledge we possess in regard to our State is little better than mere guess-work. With no registration of births or deaths, it is impossible to learn their number; and considering the great difference of mortality in different years, it is obvious that collecting reports by census every ten years gives nothing like a satisfactory view of the real state of the case.

In other matters the statistics—if a collection of guesses can be called statistics—are still more unsatisfactory. Who knows anything definite and trustworthy as to the aggregate of corn, wheat, or other agricultural product raised in the State, or the average amount to the acre? And so it is through the whole list of subjects that concern the State's prosperity. We have a soil rich in varied productiveness, a climate as favorable as any in America for the highest physical and intellectual development, and a stock inferior to no part of the race in natural endowments, while our position is convenient for the interchange of knowledge with all parts of the land; and we can not escape deserved censure, and should not escape deep self-reproach, if we continue to occupy a place behind that of the foremost State in the Union. It becomes us, then, to awake to renewed effort in every direction of useful energy if we would keep pace with the times, realize our hopes, and perform our duty; and we, as physicians, will not be held blameless if we fail to perform the part in this work for which our special training qualifies, and to which the confidence of our fellow-men encourages us.

All the indications seem to point to the conclusion that the chief advances in the science of medicine in the future will be

mainly due to a clearer appreciation of the causes of disease and its prevention. It does not seem likely that advance will be made in the practice of medicine—in the cure of disease—commensurate with the causes at work to impair the strength and shorten the lives of men. Many diseases seem to take their course in spite of all that can be done to cut them short; and it is only barely hoped that some new remedy, efficient in them as vaccination in the prevention of small-pox or quinine in malaria, will reward future research into the already well-tried *materia medica*; and, for my own part, I doubt much if the time comes speedily when the success of the best practitioners of the present day is greatly improved upon. True, we may, by improved systems of education, and the establishment of a higher standard of qualification for the practice of medicine, bring nearly all to the highest standard attainable. We may be able by such means to rid the profession and the people of the pretenders who are now a reproach to the one and a danger to the other. After this shall have been accomplished, prevention rather than cure remains rich with promise for the future.

The rapid multiplication and growth of cities, the harder struggle for existence incident to the increasing complexity of our tastes, the increase of sedentary pursuits, and other circumstances growing out of our present civilization, are causes that must continually operate to increase such diseases as have their origin in exhaustion of the vital powers.

But even in the presence of these causes public hygiene has reduced the rate of mortality to a wonderful extent in countries where they are in fullest operation; and these hygienic measures, consisting of ventilation, sewerage, and the like, have found their constant support and justification in the showing made by wisely-collected vital statistics.

The principal diseases in our State, that may be influenced by preventive measures, are malaria, consumption, small-pox, and drunkenness, though there is scarcely a single one that may not be modified favorably by such measures.

MALARIA.

The number of deaths directly due to malaria, under present means of treatment, is not large, comparatively speaking; but by its influence in aggravating the intensity of other diseases it adds indirectly very largely to the mortality caused by them.

Robbed of the terrors that attached to it in centuries past by the discovery of quinine, the great loss of life and time yet due to it, directly and indirectly, have been in a great measure lost sight of. That loss, however, is still so considerable that it is manifestly the part of wisdom to search for means to abridge its influence. Throughout the South there must continue to be much of malaria for centuries to come, if not for all time. Much of the land is of such a nature that probably it can never be effectually drained, and could not be cultivated to advantage even if drained. But in close cultivation and careful draining lies the only hope of escape from malarial influence. Of course it is not to be expected that any great special effort will be directed to the accomplishment of this object; but it is to be looked for, in so far as it is practicable, along with the general development of all the interests of the State.

CONSUMPTION.

Of all the causes of death, consumption stands boldly at the head. The present extent and the rate of increase of this disease would be truly alarming if it were not for the air of poetic interest thrown about the death to which it leads. The actual pain of the disease being small, its lesions not being open to ordinary observation, and it being generally regarded as leading with certainty to a fatal result, it meets the conditions of death that the instinct of the race seems to accept with the greatest resignation; for man and beast alike are averse to the idea of sudden death.

I fear I am behind many of the profession in the matter of faith as to the cure of consumption by the administration of medicine, though I have great confidence in the results of hygienic and climatic treatment.

In regard to the climate to be chosen by consumptives, most valuable information is furnished by the vital statistics of the census. From this report it appears that the farther south and the farther from the sea-coast the less the percentage of deaths from consumption. This indicates as the region most favorable for consumptives that extending along the Rocky Mountains from Colorado south through New Mexico and Western Texas into Mexico. The rapid increase of facilities for travel in that region will ere long render it a practicable and easy matter for invalids to visit those parts, and for families, having a strong

consumptive tendency, to take up their abode there before the disease has time to develop. But when we consider the vast number of families suffering from the disease, it is questionable whether any means can sensibly affect the aggregate result.

The increasing care now everywhere taken with children results in helping a great many over the critical periods of early life, who are only to fall by consumption on reaching maturity. If I might suggest preventive means for the young in this connection, I would recommend the abundant use of flannel through the entire cold season, and much open-air exercise.

The tender care which saves the weak at the same time stands in the way of the rugged development of the strongest, and it is much due to this, no doubt, that a condition of health closely bordering on disease is being experienced by so large a proportion of men in recent times.

I am not of those who think the necessity of caring for our sick and helpless fellow-beings an unmixed evil to the race. If we never encountered disease and suffering, either in our own persons or in those so near to us by ties of kindred or friendship as to make us feel a lively sympathy with sufferers, we should soon become a heartless race indeed. And, organized as we are, it may be debated whether the happiness we derive from extending and receiving sympathy does not counterbalance the misery of disease. And since the happiness and prosperity of society must be made up both of moral and material elements, the suffering invalid, teaching us lessons of patience, sympathy, and love, may not in reality be greatly less useful to society than the strong man, adding to its inventive thought, and its productive industry. Whether this be true or not, we are compelled to face the fact that consumption is now and is likely to continue increasing; and if the subject contains a feature of comfort, we harm no one by trying to avail ourselves of it.

ALCOHOLISM.

Judging from the census reports, we might conclude that this heading embraced so small a factor in the production of mortality that it is out of place in a report on vital statistics. Twenty-five deaths of males and two of females are set down as the aggregate for Kentucky of deaths from alcohol, and that under the head of deaths by poison. But of all causes of death this undoubtedly is the one most likely to be misreported. Even with

physicians there is a great reluctance to return "death from delirium tremens" in their reports; and as for a family telling the census Marshal that a husband or brother died from the effects of habitual drunkenness, it is a thing certainly not to be expected.

It is a question then which is to be judged of by individual experience and observation. For the most part the inebriate dies of some intercurrent disease rendered fatal by alcoholism, and this disease is set down as the cause of death. That man who has been drinking for years, but just keeping sober enough to be on his feet, and who has thereby produced cirrhosis of the liver, died of "dropsy;" the well-to-do or rich man, who has been subject to attacks of mania a potu, died of "apoplexy" or "congestion of the brain;" while thousands of others, embracing many of the favored and gifted of the land, have their cases whispered around among friends, and then appear in funeral notices as having been taken away by the "providence of God;" and withal no record of blasted hopes and wasted opportunities, none of disgraced families, none of insanity, idiocy, and imbecility transmitted to offspring.

I am not among extremists in the matter of abstinence, not one of those who believe that alcohol in all its forms is essentially a poison and unmixed evil; but that its excessive use renders it one of the most terrible scourges of the human race is a truth that no man can question.

Angry debate of a question like this is ever out of place; and most especially can the friends of temperance and humanity possess themselves in patience at this time in view of the results which the rapid march of events is leading to in the no distant future. The evil is fast working its own cure. Every day more effectual means of preventing drunkenness are being devised and put in operation. In our own State, since our last meeting, many laws, local in their application, have been passed, prohibiting the sale of intoxicating drinks, and that for localities where it was least to be expected. Kentucky is famously slow in moving; and it may be with confidence predicted that in all the States such measures will soon be adopted as will effectually do away with drunkenness.

The habit of drunkenness is every day coming to be more and more abhorred, and the bar-keeper is in most places, by the

very token of his profession, removed from the circles of respectable society. The growing abhorrence felt for drunkenness has no doubt the effect of causing those who have once taken the downward path to travel it with a quicker pace; but it will deter others from starting.

In our own profession it is pleasing to see how people are coming to discriminate in favor of soberness. Formerly it appeared to be somewhat of a recommendation to a doctor to get drunk. If he could only manage to fall off his horse two or three times on his way to see a patient, he was considered to have proved himself something of a genius. Now people are coming to see that they employ drunken physicians at the imminent risk of life, and are letting them severely alone. It is an exceedingly rare thing at present that a physician recommends to a patient the habitual use of whisky; and it is to be hoped that this is a step which soon no man's conscience will permit him to take.

To the laboring poor most especially does abstinence from intoxicating drinks commend itself, both as a matter of duty to those whose welfare depends upon them, and as a means of defense against oppression.

The complexity of wants growing out of our advanced education are all the time demanding greater expenditures for their gratification. At the same time the wealth of the country is being gathered by a system of legal robbery into the hands of great monopolists, whose interest it is to keep the people in the most helpless and dependent condition consistent with the accumulation of gains for themselves. The fates seemed to have decreed that out of the condition of things produced by these causes shall grow, and that before many years, such a conflict as history has never yet recorded.

In the moral world, too, any man who is watching the course of events can not fail to see influences at work fast preparing men to challenge those who have power of whatever kind, whether of wealth or authority, either to show their right or prove their might.

The divine right of kings is a claim long since dismissed from the last court of appeal—the expressed and enforced will of the people; and the right to wield power gained by corruption and fraud seems likely at no distant day to be tried as by fire.

It is therefore incumbent at this above all other times that soberness should prevail, that men may think clearly and act justly, to be informed in order to the wise direction of effort, and especially to practice economy in order that dependence may not cripple the efforts that seem so sure to be demanded. Numberless reasons, then, may be given for putting it out of the power of men to fall into the debasing habit of drunkenness, and to incur the waste of habitual indulgence; and in the hands of the medical profession above all others is the power to contribute to its speedy consummation.

SMALL-POX.

During the year just past some parts of the State have suffered largely from an epidemic of small-pox. This has been especially severe in the city of Louisville.

The mortality from this cause has been very large even as reported. But any one acquainted with the working of the health department of the city government will not accept the reports as anything like a true showing of the actual mortality. The law required that every house in which small-pox occurred should be designated by a yellow flag. This to the great mass of people was surprisingly distasteful. It being soon found that from favoritism or other cause the precaution was neglected in many instances, patients commenced complaining of their physicians when their cases were reported, and the result was that many were kept secret. Besides, in many instances, families preferred to treat their own sick without the aid of physicians. And in either case when those died who had not been, according to law, reported while sick, they were not reported as having died of small-pox. To dereliction of duty on the part of health officers, in very great measure, could nearly all the evils of this course be attributed. But a more censurable feature of the epidemic was the failure on the part of the authorities to provide at the very outset for the thorough vaccination of the entire city.

The efficiency of vaccination as a protection against small-pox, when thoroughly performed, ought to be considered as settled beyond any controversy; and re-vaccination is an essential element of such thoroughness. To be perfectly protective in each case, vaccination ought to be repeated until it fails to form a pustule. It is to be hoped that during the absence of the

disease efficient steps will be taken to prevent its return, and that we will not wait until in the midst of another epidemic before anything is done.

I have thus hastily gone over the points that presented themselves most prominently for consideration, though this I have done rather from a sense of duty than otherwise, for the want of proper information has rendered the task anything but a pleasant one. The class of statistics that physicians are most interested in are such as we ourselves must collect. No doubt increasing care will mark the taking of each successive census by the government. We need statistics for the country of the class obtained at large hospitals in great cities. We need to know the duration of disease in private practice in both city and country, and a careful showing of all the influences that affect the course of disease. It is desirable that we have a rigidly-enforced registration of births and deaths. But it is useless to particularize. It is enough to say that nothing less than a thorough, comprehensive, and accurate collection of statistics will subserve the ends of either science or public polity. Besides, a people who select such men as our legislature is, for the most part composed of, are not yet ready to do much in the way of statistics. The good effects reacting from the habit of collecting and interpreting facts of the class referred to must alone be abundantly remunerating. The practice of just observation thereby induced will give an impetus to our social development scarcely yet dreamed of.

In conclusion it may not be out of place to state that, in view of the direction and rapid strides of the present day, it is no strained conclusion that society's statistics will soon become the basis of the social conscience.

TOBACCO—ITS USES AND ABUSES.

Read before the Richmond Academy of Medicine September 18th, 1873.
By JOHN N. URSHUR, M. D., Richmond, Va.

The subject which has been chosen for discussion this evening, is one which should have very great interest for us, who are engaged in the daily practice of a profession which has for its object not only the cure but the prevention of disease.

Tobacco as a cause of disease is the standpoint from which we

intend to view it—with its effect on the economy. But everything has its uses as well as abuses, and these we propose to glance at before studying it in the light which most interests us as medical men.

Tobacco is a sedative narcotic of great power in whatever way administered, whether internally, by enema, locally, or in the form of cigar, pipe, chewed or snuffed, the latter uses being those which produce the ill effects which we are so often called on to remedy. It has been used in the form of enema and cataplasm chiefly, for the purpose of producing relaxation in muscular spasm, either in spasms of the glottis in croup; or for the purpose of reducing fracture or luxation, strangulated hernia, etc. But it has been long since it was brought into requisition as a remedy, having in all these been supplanted by chloroform, easier of administration, and more kindly and comforting in its influence. It is chiefly beneficial in some cases of insomnia and chronic vigilance where opium or its alkaloids are badly tolerated; but here, too, it must compete with chloral, and in the majority of cases be the loser.

It is a question well worthy of consideration, whether or not an allowance of tobacco to those insane, who suffer most excitement at night—rarely ever sleeping, and whose minds are then most actively at work—would not comfort and compose them to that extent, as in a great measure to conduce to the cure of at least some cases?

Taken in the form of a cigar at night, tobacco produces lassitude and a tendency to repose, but in the morning is apt to produce nervousness and inquietude. A writer in the *Amer. Journal Med. Sciences* (for January, 1869, p. 99), relates a case in which there was distressing insomnia. Opium being badly tolerated, recourse was had to a cigar with the happiest effect. The patient being unaccustomed to tobacco, a few puffs of a cigar were sufficient to produce sleep. In asthma it has been found of use, and acts probably by equalizing the nervous influence through the par vague. The influence of moderate smoking is to increase mental vigor, but the abuse of this habit renders the mind more or less torpid, and incapacitates it for mental labor. The effect on digestion is beneficial, as it causes an increased flow of the gastric and intestinal juices. It also stimulates the action of the skin and kidneys.

But the action of tobacco varies with the dose; in a lethal dose it proves fatal by the powerful stimulation of the heart through the pneumogastric nerve, thus arresting its action. One of the leading characteristics of tobacco is its readiness of toleration. Prof. See found that while a small dose of nicotia given to a dog the first time, caused marked cardiac symptoms, the same dose repeated a few hours afterwards was inert (*Amer. Medical Sciences*, Oct. 1870, p. 534).

Thus much for the uses of tobacco. It is needless to say that they are not so important, but that we could very well afford to abolish it as a remedy, and a so-called necessity, for those who are addicted to the habit of chewing, smoking or snuffing, a habit, we may say, which restricted within proper bounds would do no harm; but it too often is uncontrolled. Running into excess, it becomes the cause of disease, shattering the nervous system, and making the man feel that he is in the grasp of a power, from which he would escape if possible, but now finds it too late.

Of the physiological action of tobacco, Vold and Eulenburg say (*British Med. Jour.* May 12th, 1872) that in the tobacco used for snuffing and smoking, the amount of nicotine is so minute that nothing like nicotine poisoning can result from their use. The action of tobacco smoke and tobacco juice is due to pyridine, picoline, colledine and other bases forming an homologous series, which are produced by the process of combustion, and not to nicotine. The reason why stronger tobacco can be smoked in a cigar than in a pipe, is that in a pipe a large quantity of pyridine is formed, which is very volatile and stupefying; in a cigar but little pyridine and much colledine.

The unpleasant symptoms from excessive use of tobacco are due to the pyridine and picoline bases; they have been attributed to nicotine because these bases have a high boiling point and very much resemble it in smell and physiological action, producing contraction of the pupil, difficult respiration, convulsions, and death.

In speaking of the uses of tobacco we stated that it facilitated digestion, but we now add that that ceases to be the case when tobacco is abused. We are confident that we have seen cases of dyspepsia, attended with loss of appetite, distressing water-brash, and at times heartburn, caused by excessive use of tobacco, which have been relieved by a diminution of the quantity used, or an abandonment of the habit altogether. In this assertion we are supported by the U. S. Dispensatory (p. 669), which states "that it enfeebles the digestive powers, produces emaciation and general debility."

We do not say that the tobacco acted altogether directly but indirectly, chiefly through over stimulation of the pneumogastric nerve. When chewing is the mode of using, it to some extent acts directly from the large loss of saliva which plays an important part in the process of digestion. However, excessive use of tobacco is not a very common cause of dyspepsia. Dr. Chambers (*The Indigestions*, p. 328) relates only two cases, one from smoking and one from snuffing, and expresses his surprise at the small number of cases in his note-book in which indigestion was due to this cause, because "several medical writers consider it a matter of course that the pleasures of the pipe should have a special deleterious effect on the salivary glands and stomach."

The poison of tobacco seems to attack more particularly the nervous system, and all of us have seen more or less of its evil effects as produced in this direction. Intermittent pulse, shaky hands, palpitation of the heart, often causing the patient serious alarm, and imaginary impotence, are the most prominent. Dr. Chambers (page 326) relates a case of imaginary impotence cured by abandonment of the habit of smoking. Mr. Hutchinson (*Med. Times and Gazette*, Sept. 4, 1869) reports a case of amaurosis caused by excessive smoking, and calls attention to the fact that the patient was a teetotaler. The patient himself attributed his loss of sight to smoking. The condition of the eyes, after dilating the pupil with atropia, was a yellow gray tint of the disks, presenting shelving cups; the central vessels were of normal size, and the minute capillaries were not so entirely absent as usual. Mr. Hutchinson concludes that he is "decidedly of the opinion that the injurious effects of tobacco are to some extent counter-balanced by alcohol."

Tobacco is seldom used at this day as a remedy by the faculty, but we sometimes see the ill consequences of its local application by some ignorant and meddlesome old woman. The writer once saw death caused by the application of a fomentation of tobacco to the chest of a child suffering with pneumonia.

Its wide spread use in various forms at the present day as a luxury is much to be deplored, and often makes those addicted to the habit of chewing, smoking, or snuffing, sooner or later, repent for having either touched or tasted, they being ill repaid by the production of the legitimate fruits of excess. Sleepless nights, intense nervousness, general debility, and poor digestion, being by no means counter-balanced by the pleasures of the pipe or snuff-box.

ALBUMINOUS EXPECTORATION.

A very lively and very long-drawn-out discussion on this subject has occupied a good deal of the time of some of the societies, and of the space of most of the medical journals, of France, since the beginning of the year. The debate appears to be drawing to a close; and we avail ourselves of a spirited summary by M. Labbee, in the *Mouvement Medical*, to give our readers a review of what has been said and written on the matter.

A tout seigneur tout honneur. M. Terrillon, last March, defended an unusually good and interesting thesis on the *Albuminous Expectorations following Thoracentesis*. He is the cause of all the commotion; armed by twenty-one observations, of which six are unpublished, he started the debate. He did not wish, he said, in any way to attack the favorable position of thoracentesis; his aim was to draw attention to that phenomenon which M. Pinault

was the first to point out in his thesis in 1853, in which he sought to arrive at its rational explanation. In 1869, M. d'Espine communicated to the Societe de Biologie two instances of abundant serous expectoration following thoracentesis. In 1872, M. Woillez, in his clinical treatise on acute affections of the respiratory organs, quoted observations of this kind (pp. 4, 8, *et seq.*). M. Marrotte, on May 22nd, and M. Behier, on July 30th, communicated to the Academy of Medicine facts on the subject worthy of attention.

It will be well to examine *seriatim*, by the light of this discussion, the symptoms and kinds of expectoration which ensue after thoracentesis: the origin of the expectoration, its duration, the nature of the fluid, and its quantity; the mechanical and microscopical examination of the two fluids and the two deposits, one proceeding from thoracentesis, the other from expectoration; and the symptoms and complications. After this, the various hypotheses, which have been adopted to explain this accident, may well be considered.

The expectoration of albuminous fluid after thoracentesis, according to M. Terrillon, presents three different characters, according to the quantity expectorated, and the gravity or mildness of the symptoms. The mild form is characterized by slight dyspnœa, and by the expectoration of a fluid in which the presence of albumen is revealed by nitric acid, and which varies in quantity from a few up to 700 or 800 grammes, when it has attained a sufficient duration, which may vary in time from a few hours to about a day. The intense form bears the following characteristics: acute dyspnœa; abundant expectoration (1200, 1500, 2000 grammes, and even more); frequent cough, generally spasmodic, accompanied by fine, subcrepitant rales. The duration of these symptoms varies from several hours to a whole day. In the third and most serious form, the patient, after twenty or five-and-twenty minutes of comparative quiet, is suddenly seized with acute, very intense, and most painful dyspnœa, with spasmodic cough, accompanied by a frequent spitting of froth, after which death supervenes, with all the symptoms of asphyxia caused by the accumulation of liquids and spumous matter throughout the respiratory system. M. Terrillon relates only two fatal cases out of the twenty-one which he has been able to bring together, to which MM. Behier and Liouville have added the record of a third. The escape of this albuminous liquid generally takes place from ten minutes to one hour after thoracentesis. It is of a yellowish color, more or less transparent, according to the amount of expectoration; a persistent froth forms the upper layer, the middle layer being represented by the fluid, and the lower layer by a deposit of mucous products given off by the bronchi. It coagulates when treated with nitric acid.

The analysis made by M. Bergeret includes the daily examina-

tion of the two fluids, and the microscopic examination of the deposits of both. The pleural fluid evacuated by operation was, after filtration, amber-colored, alkaline, and poor in mucine. A hundred grammes, treated by an alcoholic solution of carbolic and acetic acids (Mehu's reagent), gave 1.61 grammes of albumen after drying. The expectorated fluid, mixed with mucus, was, after filtration, clear, slightly tinged with red, viscous, alkaline; and, when treated with acetic acid, gave a copious precipitate of mucine; 100 grammes, precipitated by Mehu's reagent, gave 1.42 grammes of dried albumen mixed with mucine. The microscopic examination of the expectorated liquid showed epithelial cells in large quantity, together with pus corpuscles and sometimes red blood-corpuscles. In the deposit of the liquid of thoracentesis, pus-corpuscles only, and very few red corpuscles, were seen.

The question arises, what are the possible relations between albuminous expectoration and the copiousness of the effusion? The cases reported by M. Terrillon show, in the first instance, the abundance of the liquid in the pleural cavity, of which the average was generally from two to two and a half quarts. The most minute care was always observed in the operations. As to the more or less grave complications which may have preceded the operation, it is easy to agree with M. Terrillon, that they could not possibly have had any direct influence on the accident under consideration. The syncopal condition, the cough, the striking of the lung against the canula, the passage of air through the canula, have all been given as predisposing causes; but very reasonable explanations have been opposed to such interpretations of the phenomena. The influence of the nature and age of the effusion on the production of the expectoration has been decisively proved to be *nil*, since the majority of the cases (15 out of 20) were instances of acute pleurisy, in which thoracentesis was performed twenty or thirty days after the commencement of the disease. Nor can heart-disease be really considered as a predisposing cause; since it either did not exist or was not detected in the cases of pleurisy. One circumstance remains to which some importance might be attached: the rapidity with which the pleural liquid made its escape was noticeable in all the cases cited by M. Terrillon. We shall return to this point. The expectoration can certainly not be confounded with bronchorrhea: its difference of character is quite clear, as shown by the reaction given by adding nitric acid.

We now arrive at the hypothesis by which this expectoration has been explained. *Auctores certant*; and we find ourselves in presence of four opinions, arranged by M. Terrillon in the following order: 1. Perforation by the trocar; 2. Spontaneous perforation; 3. Reabsorption of the liquid remaining after thoracentesis; 4. Transudation of the sero-albuminous liquid through the alveolar walls, in consequence of rapid pulmonary congestion.

M. Fereol attributes the albuminous expectoration to the *passage of the pleural liquid by the lung*. In order to explain the spontaneous perforation, he imagines a special change, characterized by destruction of the epithelium and the connective tissue of the pleura, a sort of membrane being thus formed, which would allow the filtration of the pleural liquid into the lung, and its expulsion by the bronchi, without allowing the air to pass. This theory has caused one of the first who denied spontaneous perforation, M. Dujardin-Beaumetz, to remark, "Then let us employ powerful suction, such as that of the aspiratory apparatus." It is as difficult to demonstrate the existence of the perforation without pneumothorax, as it is rare to meet with pleuro-bronchial perforation in the adult. All observers have seen and cited instances of spontaneous pulmonary perforation, without pneumothorax, in purulent pleurisy; but not at all, or very rarely, in serous pleurisy. M. Barthez has demonstrated that in children absence of pneumothorax is the rule.

M. Fereol says that, there having been a preparatory process, ulcerative or otherwise, a fit of coughing comes on, and perforation occurs in the struggle. M. Moutard-Martin asks how this perforation is accomplished; and M. Fereol's answer is, "By a violent effort directed from the bronchial tubes towards the pleura; by a forced distention of the lung, which is no longer supported by a sufficient compression of the effusion; the air then contained in the bronchial tubes would be driven towards the pleura." This perforation, however, should take place at the moment when the vacuum is produced; but albuminous expectoration shows itself at a more or less distant period after the operation. We might further cite, against spontaneous perforation, Boule's case from Behier's lecture (*Union Medicale*, 175), where the patient underwent four successive thoracenteses, each followed by albuminous expectoration. It is in fact not possible to admit that four spontaneous perforations should have occurred in one subject, or that they should have been found in both lungs, the operation having been performed on both sides. We must therefore give up M. Fereol's very ingenious hypothesis, and the subtle explanations with which he supplements it.—*British Medical Journal*, Oct. 4.

ABSTRACT OF LECTURE ON THE ANATOMY AND PHYSIOLOGY OF THE OVUM IN THE EARLY MONTHS OF PREGNANCY.

By DR. R. J. LEE, Assistant Obstetric Physician and Lecturer on Midwifery at St. George's Hospital.

GENTLEMEN,—A favorable opportunity has presented itself for allowing us to investigate the different structures which surround the ovum during its development in the uterus. This subject is

full of interest to the physiologist, and of great practical importance in its relation to the symptoms and treatment of some of the diseases of pregnancy, and a knowledge of the structures we are going to consider is necessarily required before we can study the pathological changes to which they are liable.

On the table before you is a preparation of a uterus containing an ovum at a very early stage of development. The gentleman who has done me the favor to offer it to our museum requested me two days ago to be present at the post-mortem examination of a young woman who had died rather suddenly with symptoms of epilepsy. In the course of the examination we observed that the uterus was increased in size, and that there was well-marked hyperæmia of the peritoneal covering of the uterus as well as of the broad ligaments and ovaries. The probability of pregnancy was so strongly indicated by these appearances that we determined to observe great care in the operation of removing the uterus, particularly as we were informed by her mother that the young woman had menstruated six weeks before death. Before dividing the vagina, we made sections through both the ovaries, and discovered in the right ovary, which was rather larger than the left one, the undoubted evidence of pregnancy, a true corpus luteum. If you examine it, you will perceive that its length and breadth are equal to half those of the ovary itself, and that there is a cavity in its centre which communicates by a minute perforation, situated on a slight prominence, with the external surface of the ovary—that is to say, with the peritoneal cavity,—and through this perforation we may conclude that the ovum escaped.

Let us defer for the present the investigation of the structure and origin of the corpus luteum, and turn our attention to the contents of the uterus. It is almost unnecessary for me to tell you that few of us are likely to have another opportunity of examining such a preparation as this before us; for as the measurements of the sac of the chorion and the embryo, which I have already ascertained, are not more than 1 in. in diameter, and $\frac{1}{2}$ in. in length respectively, the statement made by the mother is most likely to be correct, and consequently the ovum cannot be more than six weeks old, if so much. The uterus measures 4.2 in. in length, and 3.4 in. across the fundus in its broadest part. The canal of the cervix uteri, which is included in the length I have stated, measures between 5 in. and 6 in., and is full of yellow, transparent, viscid mucus, which forms what is termed the “mucous plug” peculiar to the early months of pregnancy.

If we open the cavity of the uterus by an incision through its anterior surface, as I have already done, the ovum will be exposed to view, and on cutting through the decidua reflexa, which forms its external covering, the villi of the chorion are clearly seen. The chorion has also been divided in order to expose the

embryo, which may be observed enclosed in the delicate membranous sac of the amnion.

You will have but little difficulty in understanding the functions performed by the structures which are concerned in foetal development, if you keep in mind the fact that although there is no direct connection between the blood of the foetus and that of the uterus, yet the processes of respiration and absorption are carried on in the most perfect manner. The process of respiration is effected by the same means that are observed in the gill of a fish—that is, by the exposure of the venous blood of the foetus to the influence of the maternal arterial fluid, and from the same source the elements of nutrition are absorbed by the vessels of the chorion.

You observe that the cavity of the uterus contains fluid blood, and that its internal surface is covered with a soft spongy membrane of considerable thickness, which is perforated with numerous small orifices. If you press this membrane at any point with the forceps, you perceive that blood oozes out of these orifices; and if you endeavor to trace the canals which pass from them into the deeper layer of the tissue of the membrane, which may be done where the uterus is divided, you will find that they are connected with delicate vessels, which form plexuses of considerable size, and which pass into the uterus. This particular part of the membrane covering the uterus is termed the uterine decidua, to distinguish it from that part of it which covers the ovum, called the decidua reflexa. There is no difference whatever between these in their microscopical structure; and, what is remarkable, there are perforations in the decidua reflexa similar to those in the uterine decidua, which allow the maternal blood to pass through, and come in contact with the villi of the chorion. I may remark that it is only at this very early period that these facts can be clearly ascertained, and we might enter into many points connected with the anatomy of the decidua which would be interesting enough to engage our attention if the general view which I have given you were insufficient for the comprehension of the physiological phenomena observable in the development of the embryo. The singular fact that the villi of the chorion are surrounded by maternal blood is certainly consistent with the laws of physiology, and, as I shall show you presently, is of very great importance during the first few weeks of the existence of the foetus.

You may be surprised at finding that villi cover the whole surface of the chorion—that is to say, there is no evidence of deficiency or excess of villi at any particular spot. With the exception of three villi on the side of the chorion next to the uterus, and one single villus on the opposite side, you may perceive that all the rest of the villi are quite free, and float about in the cavity of the decidua reflexa. We are justified in conclud-

ing, as is well known to physiologists, that at an earlier period the villi of the chorion were all free, and that the process of their attachment to the decidua reflexa takes place gradually in the course of the development of the fœtus. This may be more clearly seen by comparing with our preparation another one of a uterus at the fifth month, which is here dissected. It is necessary that you should know there is another decidua, which is only another part of that which we have been considering. It is called the "placental decidua," and corresponds to the surface of the chorion which is next to the uterus. It is into the placental decidua that the three villi in our first preparation are attached; while in this one of the fifth month it corresponds to the placenta; indeed it forms in chief parts the placenta itself.

It is clear, then, that we must regard the gradual attachment of the chorion to the decidua, through the intervention of the villi, as one of the most remarkable of the series of changes which gradually result in the formation, on the one hand, of the placenta, and, on the other, of the thin, apparently simple membrane in which the fœtus is enclosed in the later months of pregnancy. Thus in one part of the chorion the villi increase, and in another they disappear; and these changes proceed concurrently and proportionately.

There is yet another point which must be noticed—namely, the alteration which takes place in the decidua reflexa and decidua uterina. The perforations we have observed gradually become impervious, and the membrane which covers the uterus, as well as that which covers the chorion, diminish in thickness and vascularity until no part of the decidua remains in possession of active physiological functions, except that part involved in the placenta. You perceive in this preparation of the fifth month that there is no difficulty in dissecting off the decidua uterina from the uterus, and that it is not more than from one-twentieth to one-tenth of an inch in thickness.

Let me draw your attention to the condition, the first specimen, of the uterine decidua close to the internal margin of the cervix uteri. You will find in some physiological works that the uterine decidua is represented as passing a short distance into the canal of the cervix with a free margin, so that you might conclude there is no protection against the escape of the blood which fills the cavity of the uterus, or, as it is termed, the decidual cavity, except that which is offered by the mucous plug which fills the cervix uteri. Now, I should not like to assert that this is never the case, but in the preparation before you the decidua passes across the cervix uteri, and thus a closed cavity is formed above it. As a further proof that the mucous plug was not the direct obstacle to the escape of maternal blood from the decidual cavity, I may state that the plug was transparent and free from any tinge of blood at its upper end.

Before the embryo is exposed to view by division of the amnion, let me ask you to observe this small and delicate membranous sac which is floating inside the chorion, and is external to the amnion. It has a long peduncle, which you will find, on close examination, passes into the umbilical cord. The surface of this sac is traversed by minute blood vessels, which proceed from two principal branches contained in the peduncle. There is a transparent yellow fluid in the sac, which consists of albumen, and is the analogue of the yelk which plays so important a part in the development of the foetal bird. The name by which the sac is known is *vesicula umbilicalis*. The vessels which cover it are arteries and veins, and though its size is so small in the mammalia, yet the fact that at this early period it is larger than in the foetus of the third month would lead to the inference that it is of greater importance at the earliest period of foetal existence than at a later time. On comparing the appearance which the sac presented when I examined it yesterday with other specimens which have come under my notice, I should certainly be inclined to think that the albumen it contains is an important source of nourishment to the embryo; indeed, when we observe, as I shall show you presently, that there are as yet no vessels in the villi of the chorion, it appears difficult to understand the means by which the embryo is nourished if it is not by the albumen in the vitelline sac.

The embryo itself may, now that I have laid open the chorion, be clearly seen. I am sure that you will agree with me, that there is not an object in nature which excites in the mind stronger feelings of interest, astonishment, and curiosity than such a specimen as this. There are still many points relating to the chorion and decidua to be considered, and I shall simply leave the specimen for your inspection till we resume the investigation at our next lecture.

DR. WILLARD PARKER ON CANCER.

Dr. Willard Parker, of New York, at the close of an article on cancers, sums up as follows:—With regard to treatment, I have not much to say. The methods employed may be embraced under the following heads:—

1. Amputation;
2. Caustic applications;
3. Compression;
4. Electrolysis;
5. Medication;
6. Moral treatment.

In the superficial cancer of the breast it is very well to use caustics. The same thing may be said with regard to cancers upon the face. The treatment with caustics in that region is good surgery. When the tumor is situated to any extent below the surface, the idea of caustics is bad surgery.

In two cases which have come under my observation, one died

within four days, poisoned by the material used for the caustic application, and the other never reached her home alive.

With regard to the treatment by the use of compression, compressed sponges being usually employed, I have seen no good from it.

With regard to electrolysis, I have seen nothing in it yet to give me any confidence whatever in its use. I have nothing, however, to say against its use. There may be something of value in it, and it should be thoroughly tried. The day was when no knowledge was had with regard to a successful method for the treatment of syphilis, but now we know that by the proper use or proper remedies, that disease can be cured, and charlatanism has left that field almost entirely. With regard to the internal treatment of cancer, I believe very much in it.

INTERNAL REMEDIES.

I believe that the day must come when something will be accomplished by the aid of internal remedies. Of the remedies now used, arsenic is perhaps the one which commands my confidence more than any other. There is another point in the treatment of cancer which I conceive to be of great importance, and that is the moral condition of the patient. I believe that it is impossible to cure our patients of cancer unless they are buoyed up by hope. Their surroundings should be of a character that will give them the greatest possible amount of comfort and happiness. Keep them in the sunlight of enjoyment, for darkness is the soil in which cancer flourishes.

THE QUESTION OF OPERATION.

Now we come to consider an important question: Do we accomplish any good by operations?

There are some who say, never operate. I think this opinion comes from the older members of the profession, who are inclined to look beyond the simple performance of the operation. The younger men, many of them, say operate. Upon this question I perhaps can do no better than to refer you to the opinions of two men who are among the most experienced of the profession, and who have had abundant facilities for making observations. I refer to Paget and Sibley, both of London.

Mr. Paget has shown, from his statistics, that the average length of life after operation is 43 months, and that average length of life without an operation is 55 months. Mr. Sibley has shown from his statistics that the average length of life after an operation is 53 months, and that the average length of life without an operation is $32\frac{1}{2}$ months. Here are the results of observations made by two distinguished authorities. I think all that I am justified in saying upon this point is, that every case must be taken by itself, looked at with all its surroundings, before a decision is given either for or against an operation.

The dangers in an operation are not great, if it is decided to perform it.

The following may be regarded as the indications, when attempting to decide upon any given case.

The older the patient, other things being equal, the more favorable for operation. If the cancer has extended so that we have secondary cancer, it is not surgical to operate. Therefore, when the axillary glands are involved, or when the skin is involved, and we have the local and constitutional disease both existing, I regard it as unfavorable for an operation. When the tumor is isolated, and there are no secondary manifestations, the conditions are favorable for an operation, and the sooner it is performed the better is the chance of preserving the life of the patient.

If a patient comes complaining of an irritable tumor of the breast, apparently connected with some disorder of menstruation, I should recommend, first, careful attention to the general health; and second, if found increasing in size, to remove it at once. There is another condition in which I would operate, and that is in the sloughing cases. Then it is done simply to make the patient more comfortable. Practically speaking, these cases do not belong to secondary cancer, and the operations are not unfavorable. But with all these cases we must use our own discretion. Select the cases, and give the benefits and advantages of an operation.

Now a few words with regard to the hereditary character of cancer. In the cases which are found in my tables, the cancer taint was present in only 28 of the whole number, 236, whose history upon this point was obtained.

Within the last year I have been examining the Registrar's Bureau of Statistics in this city, and I find, in a period of time extending over about 70 weeks, there were only 532 deaths from cancer of all kinds and in all organs, while from pulmonary consumption alone there were 6,219 deaths, or as 1 to 11½. When compared with Bright's disease it is found that about three times as many die from that disease as from cancer. From the statistics of the Registrar's office for the last five years, the following proportion of Americans and foreigners who died of cancers are found:—

Americans, 68; foreigners, 154; negroes, 5. Savages rarely have the disease.

It would seem as if this disease of the breast is found in certain conditions of life, and that in these conditions it is upon the increase.

Without pursuing the discussion of this subject farther, I will close by saying, that the conclusions to which I have arrived are chiefly as follows:—

1. That the disease is not hereditary, or if so, in a very limited degree.

2. That the disease begins as a local disease positively and purely. It becomes constitutional, just as syphilis begins a local disease and becomes constitutional.

3. That the disease occurs in those of vigorous health, instead of being connected with those conditions in which consumption occurs.

4. That cancerous parents may beget tuberculous offspring. That is, feeble constitutions arising from the effects of cancer will not beget cancer but the diseases which follow in their line are tuberculous.

5. That the moral condition has a powerful influence on the development or the prevention of the development of cancer.

6. I am very forcibly struck by the parallelism and analogy existing between cancer and syphilis. Both begin by local irritation. Syphilis is inoculable, but cancer has not been proven so to be. In this respect they differ from each other. We have secondary syphilis, and we have secondary cancer. We have tertiary syphilis, but perhaps it cannot be said that we have tertiary cancer, unless it can be said that cancer is tertiary when it affects the bones, as it sometimes does.

In conclusion, I have to say, that we must not give this subject over as an unprofitable one for study and observation. Many diseases have run rampant which finally have been made to yield to treatment, and we may hope that the same thing may yet be accomplished with reference to cancer. The work of the histologist and pathologist may yet bring us into the light, and the day may come when we can say of cancer as we can say of syphilis, it can be cured.—*Medical Record*.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Sep. 10, 1873. DR. T. C. FINNELL, Chairman *pro tem*.

AMYLOID DEGENERATION OF CHOROID WITH INTRA-OCULAR HEMORRHAGE.

Dr. H. Knapp remarked that the specimen of amyloid degeneration of the eye, with intra-ocular hemorrhage, presented at the meeting of the Society last June, had been more carefully examined, as was also the case with the condition of the patient. In consequence of said examination he was ready to substantiate the assertion that the disease in the eye was limited to that organ alone; and further, that the degeneration was confined to the arteries of the choroid. He was not aware that there had been a record of any similar case.

IRIDO-CHOROIDITIS—AN INTERESTING POINT IN DIAGNOSIS.

Dr. K. next presented an eye which he had removed that after-

noon, and gave the following history :—The patient, aged thirty, had lost his right eye when a child. The organ seemed to have shrunk from the beginning, but kept quiet until three months ago, when it became inflamed, reflecting irritation to the opposite eye. The latter eye, although found healthy, showed great derangement in its function. The damaged eye proved on examination to be the subject of irido-choroiditis, with ossification of the choroid, hence its removal. In a clinical point of view the specimen was of much interest as proving the certainty of diagnosing ossified choroid by the touch. This was done by simply pressing the moistened finger upon the outer and posterior aspect of the ball and discovering the sharp anterior edge of the bony zone situated just posterior to the ciliary body. This clinical fact was very satisfactorily demonstrated on the specimen as exhibited to the Society.

SPINDLE-CELL SARCOMA OF IRIS.

He exhibited a second specimen, consisting of tumors of the iris, which had been presented at a previous meeting, but which at the time was unaccompanied with a complete microscopical examination. Since that meeting he had had an opportunity of making such an examination, and wished to report the results. The tumors were found to be situated in and upon the anterior layer of the iris, the larger upon the superior portion, the size of a small pea; the others, on the inferior portion, the size of millet seeds. The large tumor encroached upon the middle layer of the iris, but all presented the same microscopical characteristics, viz.: those which belonged to spindle-celled sarcoma. He remarked that he had only seen another tumor of the sort in that locality on record. The specimens were exhibited under the microscope for the inspection of the members.

CHRONIC INFLAMMATION OF ANKLE-JOINT.

Dr. Sayre presented the lower portion of the leg, with ankle-joint, removed by amputation from a negro two weeks before at Healing Spring, Va. The man was a patient of Dr. Gilmore, of that place. Two years before he had sprained his ankle while porter of the hotel. He was able to do his work during that summer, but the following winter the ankle became very painful, which obliged him to keep quiet. During the greater part of the past year he had been confined to his cabin, an apartment only twelve feet square. When seen by Dr. S. the ankle was enormously swollen, puffy, and contained four or five fistulæ communicating with the joint, and from which unhealthy pus was discharged. His constitution had suffered very much in consequence, so much so that he was considered by his medical attendants almost past recovery. The limb was amputated, giving the patient the "poor man's leg," and at last account the wound had healed kindly, and for the most part by first intention.

On opening the joint the whole surface was denuded of synovial membrane and cartilage, and presented the peculiar red appearance common to chronic inflammatory disease, the result of local injury. At the posterior surface the articulating surface of the astragalus was necrosed, but in other portions of the joint there were evidences in the shape of granulations of the attempt on the part of nature to repair the mischief. The specimens, as had many others which Dr. S. had had the opportunity of exhibiting, proved that these troubles in the joint were of traumatic and not of scrofulous origin. In similar cases, but in those in which patients were surrounded with proper conveniences, he had made it a practice to open the joints, giving exit to the pent-up pus, gouging out the dead bone, and establishing free drainage. The treatment had been followed with such success that he had adopted it to the exclusion of other means.

Stated Meeting, Sep. 24. 1873. Dr. E. L. KEYES, Vice-President, in the Chair.

STOMACH FILLED WITH FÆCAL FLUID, AND NO SATISFACTORY EXPLANATION.

Dr. R. E. Van Geison presented a stomach, with the following history:—

M., æt. 55, had suffered for years from severe indigestion, abdominal pains, eructations, occasional vomiting, loss of appetite, etc. Last spring symptoms increased, he grew more and more emaciated, when occasional fever and chills set in, which were controlled with full doses of quinine after a few weeks.

Aug. 7th, symptoms of retention of urine and pain in rectum set in, followed by complete retention, which lasted for over a week. Suddenly, after a gush of pus from the bladder, all these local symptoms ceased.

Diagnosis.—Abscess of prostate from low state of system, there being no obstruction of urethra whatever.

After this his digestion improved a little until September 14th, when diarrhea troubled him. September 17th, he complained of severe pain in right side of chest. Evening of September 18th, stercoraceous vomiting set in, the bowels still acting until death from exhaustion at 4 p. m., September 20th.

Post-mortem, held September 21st, nineteen hours after death. On opening abdomen nothing could be seen excepting the stomach, and a very small loop of small intestines on the left side. The stomach fills the whole abdomen, and is full of fecal fluid. It measures more than fifteen inches in length. Small intestines found, on raising the stomach, entirely collapsed. Liver and kidneys normal. Intestines near sigmoid flexure thick and congested; near transverse colon, appearance of beginning ulceration in two or three parts. Intestines carefully,

examined revealed no perforation, as was expected. The prostate gland was normal in size.

LITHOTOMY FOLLOWED BY SLOUGH, PERFORATION OF THE RECTUM,
AND URETHRO-ANAL FISTULA.

Dr. C. K. Briddon presented a specimen of stone, with the following remarks:—I have here the fragments of a single calculus of unusually large dimensions. The gentlemen from whom it was removed was twenty-eight years old; he married at the age of twenty-five, and began to suffer from symptoms of stone three months afterwards. For a period of eighteen months he was under the charge of a man who assured him that he would dissolve his stone by medicines administered by the mouth. He then consulted a regular practitioner, who brought him to my office on the thirtieth day of May. His meatus was too small to admit a small lithotrite, which I regard as the best instrument for making such examinations, inasmuch as it enables you to measure the dimensions at the same time, and I used Sir Henry Thompson's searcher. The stone was readily detected, lying, as large stones usually do, near the neck of the bladder. From the sound on percussion I judged it to be soft, and from the impression made upon my fingers, carrying the instrument over its surface, it was considered to be large.

His urine contained one-twelfth its volume of ropy mucus. Specific gravity, 1.019. Reaction acid; no deposit of albumen on application of heat and nitric acid; and, on examination by the microscope, presented abundance of pus corpuscles, but no casts.

Lateral operation of lithotomy was done on the 14th day of June, in the presence of Professors Chas. A. Budd, Erskine Mason, Drs. Quackenboss, John Howe, Robt. W. Taylor, and others. The first incision was arrested by annoying expulsive efforts made by the patient to empty the contents of his rectum, which was supposed to have been emptied by a dose of oil administered on the night of the thirteenth, and an enema one hour previous to the time appointed for the operation. As soon as these muscular contractions had quieted down under more profound anæsthesia, an entrance was made into the bladder, and a finger detected a very large single calculus. It could only have been removed entire by an unwarrantable amount of traction, and it fortunately broke under the pressure of the forceps. By the finger I estimated its diameters at two and a half inches by two. It took some time to remove all the fragments by the scoop; but this was thoroughly done, and the bladder was well irrigated with tepid water.

A considerable amount of the calculus was lost in blood clot. The portion I preserved, after drying, weighed twelve drachms and thirty-four grains. Its composition was phosphatic, with uric acid nucleus, and if we recognize the fact that such concretions are very light, we may form a pretty fair estimate of its

size. For several days he had considerable abdominal pain, tympanitis, and tenderness, that necessitated a pretty free use of opium; but his pulse never rose above 110, and his temperature never exceeded 100 degrees Fahr.

On the twentieth he complained that the wound smarted and felt more sensitive than it had done. It looked well, but the discharge was offensive and contained some small shreddy sloughs. In the evening I was informed by his nurse that flatus had escaped by the wound, and as it was now the seventh day, and the bowels had not moved, I directed the parts to be inspected during the act of defecation. I supposed that sloughing and perforation of the gut had occurred from the unavoidable bruising of the wound in the extraction of the stone. There certainly was no wound of the rectum during the operation, for no escape took place for the seven days following.

21st, 6 A. M., was summoned to his bedside and found himself and attendant alarmed by the fact his bowels had moved, and that a part of the contents had escaped through the wound. After verifying this state of affairs, I introduced my left forefinger into the rectum, and feeling a perforation just above the sphincter, about one-sixth of an inch in diameter, I passed a blunt-pointed curved bistoury through the wound and fistulous opening, and divided the sphincter.

His bladder would now retain four or five ounces of urine, but it all passed through the wound, and being very offensive I introduced a silver catheter and injected it with carbolic acid, half a grain to the ounce.

22nd, his condition, local and general, was all that could be desired, but towards evening suffered great pain from the passage of three large solid scybala. They were more like enteroliths than anything else, and I was much surprised that their expulsion was not followed by hemorrhage. To get rid of any that might remain, and to prevent the formation of any more, I directed half a tumbler of Frederickshalle every morning.

23rd. It is probable that the fistulous communication between the rectum and the wound was not entirely above the internal sphincter, inasmuch as he has entire control over his evacuations.

From the last date until the 4th of July he continued steadily to improve. Two-thirds of the contents of his bladder passed per urethram; he had no trouble with his bowels, and the wound was nearly healed. On the night of the 4th, he sat for some time in a draught between two windows, and on the following morning complained of muscular pains and headache; his temperature was increased, and his pulse was accelerated. For this condition I prescribed five grains of quinine night and morning. Febrile movements passed away, and nothing occurred until the 8th, when he had a pretty severe attack of renal colic, which lasted about two hours and did not recur.

During my absence in Canada he had an attack of retention, followed by expulsion of two small calculi. The largest was smaller than a pea, and their passage excited an attack of epididymitis, which was attended to by Dr. Mason. On my return to the city I found the patient in very good condition, and on the 28th he was attending to his duties as book-keeper in one of our leading hotels. He had complete control over his rectum; perineal wound was all healed; but there still remained a fistulous communication between the membranous urethra and the rectum or its anal aperture. The exact position of this opening was about the superior border of the internal sphincter, one inch and a quarter from the verge of the anus. There had evidently been considerable loss of tissue. The wall of the extremity of the rectum appeared to be in close apposition with the floor of the urethra, and the length of the fistulous aperture consisted of these two walls, without the interposition of connective tissue, and measuring probably not more than two lines. Its diameter was large enough to permit the escape of at least a fourth part of the urine. The margins of this aperture were touched first with the strong tinct. of canthar. of the Pruss. Pharm. and subsequently with nitrate of silver. It was not a suitable case for the actual or galvanic cauter, which would in all probability have caused still further destruction of the thin walls that surrounded the opening. He was directed to empty his bladder with a Mercier's catheter for a month or longer. Catheterism had to be discontinued on account of the supervention of inflamed testes, which subsequently suppurated, but it is at present being carried out with better prospects of success.

Book Notices.

REPORT OF COLUMBIA HOSPITAL FOR WOMEN AND LYING-IN ASYLUM. Washington, D. C. By J. HARRY THOMPSON, A. M., M. D. With an Appendix containing a report of the Dispensary connected with the hospital on Diseases of Women, by F. A. ASHFORD, M. D.; on the Diseases of Children, by SAMUEL C. BUSEY, M. D.; and on the Diseases of the Eye and Ear, by D. WEBSTER PRENTISS, M. D.

On careful examination we find the report of Columbia Hospital to be more than a mere report of cases admitted, cured, relieved, discharged, etc.; for it gives detailed cases showing the condition and treatment of the patients from day to day. The first part of the volume is in a great measure a clinical record of all important cases occurring in the hospital, thereby giving the reader the benefit of the difficulties that occur and the methods of relief resorted to during the progress of the cases. The author is not content with mere descriptive detail, but elementary principles as well as original thought and suggestions are brought to bear on the cases, showing him to be thoroughly conversant with the subjects under consideration.

During the six years the report covers, there have been over seven hundred operations performed in the hospital, and but four deaths the

direct result of surgical interference. This we must say is a degree of success that speaks well for the skill and care of the operator. The first chapter is a report of thirty-four cases operated on for *ruptured perineum*, and all resulting favorably. The author claims some originality in this operation. Instead of dividing the sphincter, after the plan of Baker Brown, he paralyzes it by traction with his thumbs; and in the after treatment, instead of keeping the bowels constipated, he advises them kept in a soluble condition and moved at least once a day.

Under the head of *vesico-vaginal* and *recto-vaginal fistula*, the author quotes a number of pages from Dr. Sim's address, which occupies too much space, as it has little to do with the hospital report. A case of vesico-vaginal fistula, with *entire loss of urethra*, is reported cured by an operation. Also some cases of vaginal rectocele and vaginal cystocele. Radical measures are resorted to in the treatment of *prolapsus uteri*. The vaginal portion of the cervix uteri is removed, and then a portion of the mucous membrane of the vagina is removed so as to diminish its caliber.

Pessaries have been used in but three of the fifty-seven cases treated. Two being too old—near eighty years—which forbade operations; and the third refused to submit to any operation. Pessaries as a means of cure he thinks worse than useless.

Under the head of *prolapsus uteri* more space is given to the anatomy and physiology, etc., of the parts than is necessary in a hospital report, for it makes the reader weary to go over the elementary principles before arriving at the original part of the volume. A number of very interesting cases of uterine tumors are reported.

Carcinoma uteri receives considerable attention. The author quotes the opinions of the most prominent medical writers on the subject since the days of Hippocrates. And if it was not for the valuable matter that some of it contains, and especially that by Dr. J. J. Woodward, the accomplished microscopist of the U. S. Army Medical Museum, and the author's own conclusions, I would think it was too far-fetched matter to inject into a hospital report. The author says on this subject on page 143:—"A diligent examination of the investigations of others, and the careful analysis of a comparatively large number of cases which have come under my own observation, induce me to believe—first, that cancer is not constitutional in its origin, but the result of a slowly transpiring interstitial inflammation dependent upon local irritation; secondly, that there is no specific cancer cell, the cells found in the connective tissue stroma being altered epithelial cells, or the white corpuscles of the blood, their different appearances in different forms of cancer being dependent upon the stage of the disease or the origin in which it is developed; thirdly, that the probability of secondary cancer occurring after the ablation of a primary tumor depends upon the richness of the part in lymphatics and the stage of the disease."

We like very much the author's method of treating *chronic cervical metritis* and *endometritis*, but we very much dislike to read a dozen pages quoted from Tyler Smith, or any one else, on the elementary principles of the subject before arriving at the report of the cases that occurred in the hospital, especially when the quotations occupy twice as much space as the original matter.

In the Appendix there is an elaborate report of the cases of "diseases of females" at the dispensary of the hospital, by F. A. Ashford, M. D. The report is based upon 1600 cases, about 1000 being diseases peculiar to women. The greatest number of any one disease was endometritis, embracing about two hundred cases. The cases are not reported in detail, but are grouped together, and the principal causes, symptoms, and treatment given as a whole. The author embodies a great amount of the elementary principles of the science, making his report very

instructive to the young practitioner. Dr. Ashford has the same partiality for the writings of Tyler Smith that is possessed by his chief, Dr. Thompson, for he has made the same quotations about the anatomy of the cervix (see pages 290 and 291) that his chief has in the first part of the volume on pages 187 and 188. This kind of duplication makes a book not only tiresome but expensive.

The third part of this volume is a report on diseases of children, by Samuel C. Busey, M. D. The total number of cases treated was 1028. Article first is upon intermittent fever. The author relies upon quinine as the remedy in this disease, although he reports some cases cured by carbolic acid. In article second, in giving the treatment of enterocolitis, the author says:—"In my hands all vegetable astringents have proved either entirely worthless or absolutely detrimental in infantile intestinal disease. Kino, catechu, rhatany, and tannin have more often hastened death than saved life."

The volume closes with a report on diseases of the eye and ear, by D. Webster Prentiss, A. M., M. D. There were 483 cases of the various diseases of the eye and ear, and particular comment and notice is given of herpes of the cornea and of trachoma.

On account of the clinical character of the report of the Columbia Hospital for Women, we consider it a very valuable acquisition to our library, and one that we will often consult.

A. J. M.

Editorial.

COMPLETION OF VOLUME.—With this number of the *MEDICAL NEWS* is completed the volume for 1873. With the issue of another number we enter upon another volume, and we bid good-bye to our editorial labors of the present year, whatever merits or demerits may belong to them. Whatever has been done belongs to the past, and into the things of the past it must pass, while we press forwards to the future. "But if anything has been said amiss," as the clergy say, "we hope it will be pardoned us; while whatever of truth we have taught we hope it will be eminently blessed."

We believe that we have furnished our subscribers a very creditable medical journal during the present year. Really, we can not see how forty-eight octavo pages, monthly, could have been used to much better advantage. We do not, by any means, claim perfection for our work, yet we do feel that we have not fallen much short of our duty. Our original matter has, as a general thing, been good, while much of it has been equal to the best found in any of the medical journals. In our selected matter, we have drawn from the best journals published in this country, England, France and Germany, and thus have given our readers the well-considered thoughts and experiences of the best minds of the profession. Our journal is not large, but so far as it goes we cannot help but believe that it has pretty well represented the science of medicine of the present day. Very many things that have been expressed in its pages may not become established truth in medical science, but when we have presented the best material for the elaboration of facts, we have discharged our duty as journalists; for a medical journal is not merely to publish facts as they are learned, but to record suggestions, experiences, and observations which are likely in the future to lead to discoveries by their proper generalization and comparison.

We are happy to say that the profession have exhibited their appreciation of our labors by extending us a very liberal patronage. Almost every day we are in receipt of letters speaking in the highest terms of our journal, and wishing it prosperity. These kind words are very

gratifying to us and encourage us to renewed effort to deserve commendation.

We hope that all who have been subscribers the present year will continue with us the coming year; and not only so, but we hope that every one will use his best efforts to increase our circulation. Although we have a goodly number of subscribers, we have room for a few more—and really we ought to have a few more good, *paying* subscribers; for the price of the MEDICAL NEWS, one dollar and fifty cents a year, is so very low that it is positively necessary for us to have a very large subscription list of *paying* subscribers in order to meet expenses without making use of private funds. We are sorry to confess that not a few of our subscribers have been very derelict in duty in the way of paying their subscription. To some we have now been sending the journal *two years without receiving a cent*. This is not honorable nor honest. No one has any more right to take a medical journal, unless it is sent with the understanding that it is not to be paid for, without paying for it, than he has to help himself out of the storehouse of some one without giving anything in return. We hope all who are in arrears will, without further notice, settle up. In no other way can they insure the continuance of the journal. Our terms are, in advance; and when we let accounts run it is only to accommodate. But we cannot continue our accommodations month after month and have no evidence that they are appreciated,

SIR HENRY THOMPSON.—We learn from a London letter published in the *Phil. Med. Times*, that this eminent surgeon, finding a friend dangerously ill, was fain to stay with him in his time of need, and began a close attendance, which lasted for nine days. He was offered a check for a thousand guineas, but refused to take any fee whatever, alleging that he had attended solely as a friend, and would not otherwise have undertaken a case of the kind. Knowing that the family of the ex-Emperor Napoleon was not in possession of large means, he returned a fee of a thousand guineas in that case. He is still a young man, and his career has been brilliant. He is in receipt of an exceedingly large income from the successful practice of his profession, and he is a man of great decision, clearness, and liberality of mind. He is an artist of high attainments—perhaps the best amateur in oil painting in England. His pictures are not only well hung at the most difficult and eminent of English exhibitions—the Royal Academy—but command a fair market price against those of the professional artists, when he is disposed to part with any of them. He is an excellent writer, and a man of thoughtful habit on other than medical subjects; his paper in the *Contemporary Review* on the “Efficacy of Prayer,” addressed to Prof. Tyndall, opened up the controversy of which the echoes reached America; and he has all the other accomplishments, as a sportsman, etc., which suit the character of an English gentleman.

A TRIBUTE TO THE DOCTORS.—Mr. Gladstone was a guest at the recent dinner of the British Medical Association. In acknowledging the compliment of a toast to “Her Majesty’s Minister,” Mr. Gladstone paid a high but not undeserved tribute to the medical profession. He said that but for the care and watchfulness of a succession of able physicians, it would have been impossible for him to have gone through the fatigues of political life. “It is,” he proceeded, “among the mournful and noble distinctions of your illustrious profession that, although its members may not receive that acknowledgment which awaits the soldier when he falls on the battlefield, yet they are to be found in countless numbers among the truest martyrs in the cause of humanity.” He complimented the practitioners of the medical art on their high claims to consideration for their promotion of beneficial

sanitary legislation. He said that medical knowledge has advanced in recent years in a degree which is not, perhaps, paralleled in any other profession. "There is at the present day a greater and more sustained earnestness of purpose, and a more general exaltation of the aims of medical men."

Mr. Gladstone said in conclusion, "This age is distinguished by an unbounded activity in all the sciences of observation. Of all those sciences yours is the noblest. It is given to you to study the relations between the wonderful body and the still more wonderful soul and mind of man. You tread that border land in which the two come in contact. It is very easy to describe the post office or the railway system, but you have to deal with a thing far more subtle when you attempt to grasp human nature as a whole. Human progress is not to be described by formularies. It is only by the most patient observation that a sound and comprehensive knowledge on such a subject can be acquired. To you it belongs to seize the great opportunities, and to accept the great responsibilities which attach to the profession of which you are members, and to show yourselves worthy of the great vocation with which you are entrusted."

MORTUARY REPORT OF CINCINNATI.—From the mortuary reports of the Health Office, Dr. J. J. QUINN, Health Officer, for the four weeks ending November 15, we glean the following:—

Causes of death:—Abscess, 1; Apoplexy, 11; Congestion of Brain, 11; Disease of Brain, 2; Inf. of Brain, 4; Concussion of Brain, 1; Bronchitis, 1; Cancer, 7; Drowning, 3; Railroad Casualty, 1; Cholera, 1; Childbirth, 1; Cholera Infantum, 2; Congestion of Lungs, 1; Consumption, 43; Convulsions in Children, 27; Croup, 3; Cyanosis, 1; Debility, 9; Delirium Tremens, 1; Diarrhea, 9; Diphtheria, 9; Dropsy, 9; Acute Dysentery, 10; Chronic Dysentery, 2; Enteritis, 8; Entero-Colitis, 1; Fever, 2; Scarlet Fever, 95; Typhoid Fever, 24; Typhus Fever, 6; Intermittent Fever, 3; Gastritis, 3; Disease of Heart, 13; Hemorrhage, 2; Hydrocephalus, 4; Homicide by Shooting, 1; Inanition, 5; Intemperance, 3; Jaundice, 2; Disease of Kidney, 1; Disease of Liver, 4; Marasmus, 2; Meningitis, 3; Cerebro-Spinal Meningitis, 4; Nervous Shock, 1; Neuralgia, 2; Obstruction of Bowels, 1; Old Age, 3; Paralysis, 2; Pericarditis, 2; Peritonitis, 5; Pneumonia, 13; Typhoid Pneumonia, 2; Premature Birth, 5; Rheumatism, 1; Scrofula, 1; Stillborn, 22; Suicide by Shooting, 2; Suicide by Drowning, 1; Syphilis, 1; Tonsillitis, 2; Tabes Mesenterica, 1; Teething, 1; Tetanus, 2; Ovarian Tumor, 1; Uremia, 1; Ulceration of Umbilicus, 2; not stated, 7. Total, 447—168 adults, 279 minors; married, 111; single, 313; widows, 17; widowers, 5; not stated, 1 male.

THE ATTAINABLE LIMITS OF OPERATIVE SURGERY.—In his introductory lecture at University College Mr. Erichsen made the remarkable assertion, says the *Lancet*, that the attainable limit of manipulative and operative surgery had been nearly reached, if not quite. Coming as it does from one greatly experienced in the operative department of surgery, the statement is very significant and demands attention. The term "attainable limit," or "finality," as the lecturer called it, must, however, be accepted with a certain amount of reservation, lest by prematurely arrogating perfection we hinder further progress and retard a noble art. But it is only reasonable to assume that any merely manipulative art can be elaborated only to a certain degree, and that in time a point will be reached beyond which it is impossible to go. Varying conditions may suggest endless modifications, but the principles of the practice, so to speak, remain the same. If we remember that almost every artery in the body up to the aorta itself has been ligatured, that almost every articulation has been excised, that large bones have been removed, that organs previously considered vital have

been extirpated, it must be acknowledged that something like finality has been attained. It is true that new methods of accomplishing a particular object in manipulative and operative surgery are constantly being devised; but in all these there is rarely little more than the elaboration of some old principle. The valuable method lately adopted by Esmarch of performing bloodless operations on the distal portions of the extremities, and to which fuller reference has been made by us, is sufficient proof that progress is still being made; but even this recent plan is not new, for the same object had been previously attempted by similar but less perfect means.

That the practice of surgery may become of still greater service to the community, it is therefore necessary now to turn the surgical mind in another direction, and by developing the science, to remove the necessity of what has been called the opprobrium, but which is nevertheless the glory of the art—operative surgery. Scientific surgery must be cultivated with greater diligence and zeal, for from it must come any fresh achievements and new conquests. At the same time we perfect the use of the knife, we must strive for its substitution by means more subtle but equally potent and effectual. It is true that in many cases, as in accidents and injuries, the knife cannot be dispensed with, but it is the province of scientific surgery to find out what will prevent diseases attaining the magnitude that entails the horrid necessity of operative interference.

It is, however, a serious fact, that notwithstanding the perfection in the manufacture and mechanism of instruments and the method of using them, the results of operations, as regards life, remain about the same as when they were more rudely performed and instruments less ingenious. The results of a given operation as regards the individual are better, but the mortality of all operations has certainly not diminished in anything like a proportion corresponding to the progressive perfection of surgical manipulations. All the causes of this are not evident, but some are sufficiently obvious to be traced out and dealt with. We shall find, for instance, that there has been very little improvement in the external hygienic conditions by which the patient is surrounded before and after the operation. He is placed in the same wards, most of which are ventilated in the same rude manner as formerly, and little has been done to diminish the risks attendant on surgical wounds in the wards of the hospital. The fact is, that what is often regarded as the result of an operation is the effect of hospitalism; and although a certain mortality may be necessarily associated with the system of hospitalism, it is equally certain that the number of deaths may be greatly diminished by attention to a strict hygiene. It is this part of the subject of scientific surgery that calls for a closer study and promises greater results than perhaps any other department.

GALVANO-FARADIC MANUFACTURING COMPANY.—The advertisement of this company will be found in our advertising form. Their work is spoken of in the highest terms by those of the profession most competent to judge. Drs. Beard and Rockwell, of New York, say:—"We have examined and carefully tested the apparatus for the generation of both forms of Current (the Galvanic and Faradic) manufactured by the Galvano-Faradic Manufacturing Company, and find them reliable and worthy of confidence." Dr. W. A. Hammond, in his translation of Meyers on Electricity, also speaks of this company's machines in the highest terms. We have no doubt, from our own experience with them, they are fully what they are represented to be, and worthy the confidence of the profession.

Their electro-magnetic machines (giving the interrupted current) are graded according to size, Nos. 1, 2, 3, and 4.—the prices being respectively \$10, \$16, \$22, \$33. The last has two cells—one in reserve—and is designed more particularly for physicians. These have a zinc

and carbon plate, and are put in operation by a solution of bichromate of potash. The galvanic batteries have respectively eight, sixteen, and thirty-two cells, the prices being respectively \$20, \$35, and \$60. By the batteries is obtained the continuous current which is applicable in many cases in which the interrupted or faradic current is not.

All these instruments combine elegance, simplicity, power, endurance, facility of use, range of effects, and cheapness. They will remain in operation for two or three months without changing the battery fluid, if proper care is taken in their management. For sale in Cincinnati by Max Wocher and Wm. Autenreith.

WEBSTER'S UNABRIDGED DICTIONARY.—We presume that no book in the world contains so large an amount of philological learning as Webster's Unabridged Dictionary. But not only is its mere philological learning great, but it is remarkable for what is embodied in its pages of every other kind of knowledge. In any department of science the cultivator can consult its pages with advantage. Although not a medical work proper, it should be found on the library shelves of every physician, both for the purpose of reference in regard to words generally, and for information in regard to medical and scientific terms. In the original preparation of the work, Dr. Tully, an eminent physician, assisted. In the last revision, Prof. R. Cresson Stiles took part in furnishing the definitions in physiology and medical science. Members of the profession will therefore find in it quite all they will need in a medical lexicon, and in all other respects they will find it to be the best dictionary in the English language ever published.

The advertisement will be found in our advertising form.

LIPPINCOTT'S MAGAZINE.—This is an illustrated monthly of popular literature and science. The December number just issued is embellished with numerous beautiful engravings, and has fourteen entertaining articles. The new volume, commencing with the January issue, will be replete with the most attractive features. It is the intention of the conductors of the magazine to render it a model of literary and mechanical excellence, and with this view no advantage will be neglected which either talent or capital can command to render each issue an agreeable and instructive compendium of popular reading.

Published by J. B. Lippincott & Co., Philadelphia. Price \$4 a year.

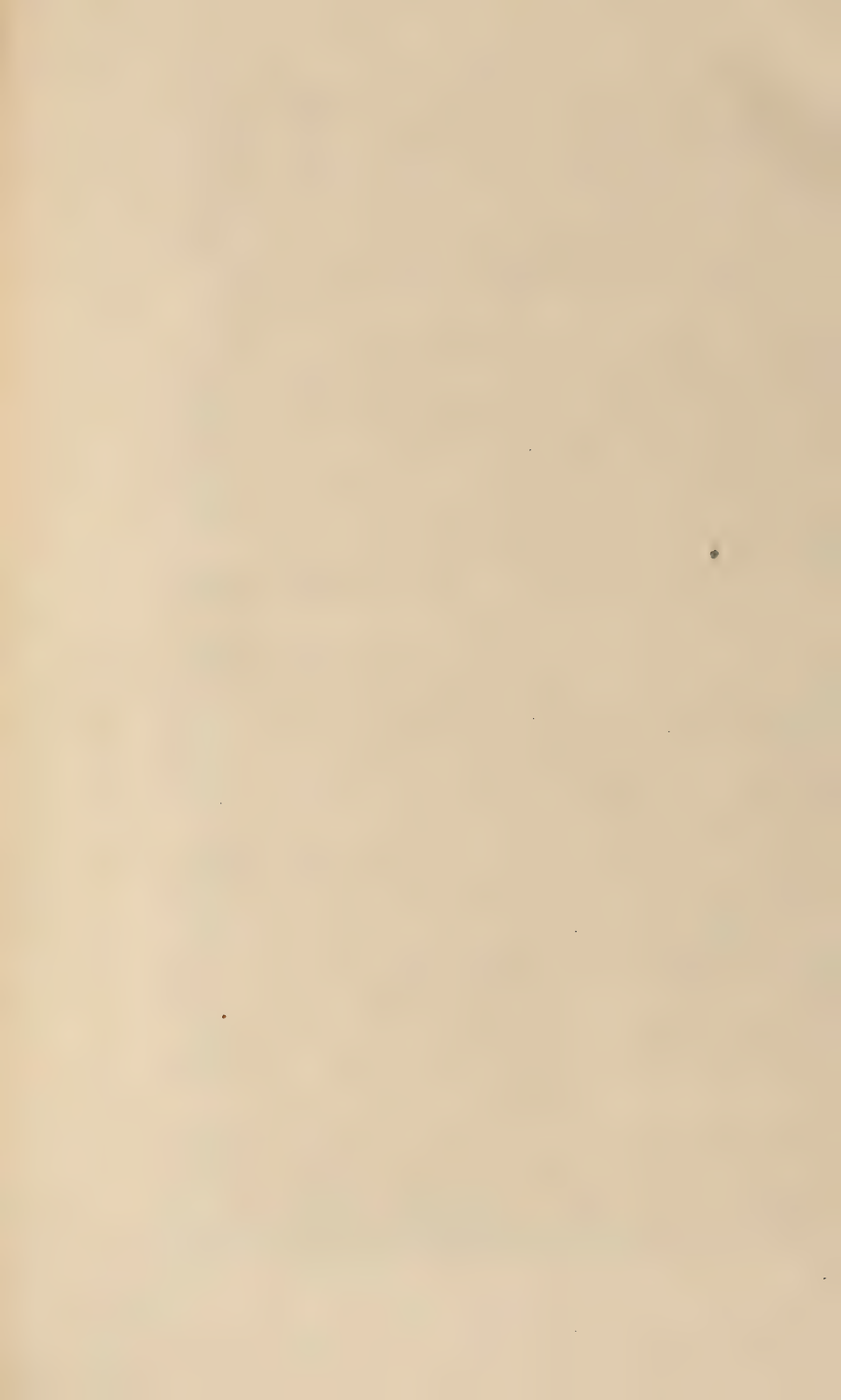
SCRIBNER'S MONTHLY.—This excellent monthly commenced a new volume with the November number. A splendid series of illustrated papers entitled "The Great South," by Edward King, will be published. These papers have been nearly a year in preparation, and are of great national interest and value. The serial story of the year, "Katherine Earle," by Adeline Trafton, is said to be a charming love story, whatever that may be. There will be a Christmas story by Bret Harte, and shorter stories or novelettes by the best writers. A series of historical sketches by Froude, and critical papers by Stedman.

Scribner's Monthly holds a first rank among the magazines, and the publishers are sparing no pains to maintain it in the high position which it holds. Published by Scribner & Co., New York. Price \$4

ST. NICHOLAS.—This is the title of an illustrated magazine for girls and boys published by Scribner & Co., of New York. It is handsomely printed on fine paper, and illustrated throughout by numerous large pictures elegantly executed. A tastier magazine for young people we never met with. It is quite suitable for the young folks of eight and ten years and upwards. If subsequent numbers be up to the standard of the first number on our table, and we have no doubt they will, *St. Nicholas* will become immensely popular. Price \$3.

CONTRIBUTORS TO VOL. II., 1873.

- ALLEN, NATHAN, M. D., LL. D., Lowell, Mass.
BALDWIN, HENRY A., M. D., Ohio.
BRAMBLE, D. D., M. D., Prof. in Cincinnati College of Med. and Surg.
BANNING, W. H., M. D., Vienna Cross Roads, Ohio.
CALDWELL, J. L., M. D., Beavertown, Ohio.
CLEAVER, H. T., M. D., Keokuk, Iowa.
DUTCHER, A. P., M. D., Cleveland, Ohio.
DAVIS, R. P., M. D., Red Key, Indiana.
HAUGHTON, E., M. D., Richmond, Indiana.
HITE, C. E., M. D., Thornville, Ohio.
KAY, ISAAC, M. D., Secretary Clarke County, Ohio. Medical Society.
LEE, BENJAMIN. A. M., M. D., Philadelphia.
MINOR, THOS. C., M. D., Cincinnati, Ohio.
MILES, A. J., M. D., Prof. in Cincinnati College of Med. and Surg.
MC ELROY, Z. C., M. D., Zanesville, Ohio.
MC ALLISTER, H. G., M. D., Cincinnati, Ohio.
REED, R. C. S., M. D., Prof. in Cincinnati College of Med. and Surg.
SWETNAM, J. M., M. D., Kirksville, Mo.
SIGAFOOS, J., M. D., Columbus City, Iowa.
SMITH, D. T., M. D., Kentucky.
TRUSH, J., M. D., Prof. in Cincinnati College of Med. and Surg.
THACKER, J. A., M. D., Prof. in Cincinnati College of Med. and Surg.
TADLOCK, ALEX. B., A. M., M. D., Knoxville, Tenn.
TAUBER, BERNARD, M. D., Paducah, Ky.
VAUGHAN, DANIEL, A. M., M. D., Cincinnati, Ohio.
WRIGHT, S. VAIL, M. D., Greensburg, Indiana.
WOOLSEY, ISAAC G., M. D., Locust Grove, Georgia.
WRIGHT, J. W., M. D., Coshocton, Ohio.
WILLIAMS, J. H., M. D., Lima, Ohio.



INDEX.

Animalcules in Buttermilk. . .	43	Cincho-Quinine....	230
Antiquity of Man in America. .	51	Cincinnati Hospital...237, 241, 287	
Arsenic in Green Colors	91	289, 477	
Atrophy, Progressive Muscular	121	Colles' Fracture.....	283
Aneurism, Surg. Treatment of.	129	Carbolic Acid in Fever	285
Antiseptic treatment of wounds		Clarke County Medical Society	
of larger joints.....	212368, 459, 494	
Aconite in Acute Pneumonia..	236	Cerebro-Spinal Meningitis.	374, 460
Anaplasia, Human	280	Chaton, Case of.....	389
Ammonia in Snake Bites.....	285	Chorea.....	393
Anorexia, Hysterical.....	341	Chloroform. Administration of.	396
Athetosis.....	421	Croup, Lime Vapor in.....	402
Atropia and Salivation.	522	Cervix Uteri, Elongation of...412	
Albuminous Expectoration....	551	Carbolic Acid in Intermittent	
Anatomy and Physiology of the		Fever.....	429
Ovum	554	Chloroform, Death from.....	433
Amyloid Degeneration of Cho-		Cancer, Epithelial.....	456
roid	561	Cancer	558
Attainable Limits of Operative		Chancre and Bubo.....	457
Surgery.....	570	Clavicle, Fracture of	462
		Card by Ernst Zeusehner.....	479
Blood in Pulmonary Tubercu-		Cholera, Treatment of Algid	
losis.....	16	Stage	516
Battery, Prof. Tyndall's.....	45		
Beef-Tea, New Method of		Delusions, Epidemic.....	50
Making.....	89	Diagnosis, Lesson on.....	87
Board of Health.....	97, 289	Disinfection of Rooms.....	93
Bone, Union by First Intention	139	Death, Test of.	94
Boils and Whitlow, Abortive		Darwin's Theory	96, 435
Treatment of.....	235, 285	Disease, Natural Cure of.....	190
Borax and Nit. Potash in		Diphtheria, Cause of Collapse in	383
Aphonia.....	235	Dysentery, Ergot in.....	426
Bellevue Hospital, Peculiarities		Diseases of the Uterus... .	533
of Practice.	277		
Blood in Relapsing Fever....	382	Elixirs	77
		Ectrotic treatment of Small Pox	90
Clinical Experience in Private		Eclecticisim Defined.....	98
Practice.....	5	Ergot in Headache.....	187
Cysticercus Cellulosis.....	25	Enemata, Nutritive	188
Crania of Mound Builders.....	35	Eucalyptus Globulus.....	197
Chloral in Odontalgia.....	44	Eye and Its Treatment.	208
Carbolic Acid in Small Pox....	46	Epilepsy, Hints on	274
Calomel. Exhibition of.....	88	Ergot Employed by Midwives.	282
Cæsarean Operation.....	90	Emphysema, Anatomical	
Chloral in Venereal Ulcers....	91	Changes in.....	351
Carbolic Acid, Antidote of....	91	Epistaxis, Sponge Tent in....	383
Census for 1870.....	162	Eclampsia, Case of.	391
Cattle Plague.	186	Ergot in Dysentery.....	426
Cardiac Murmurs.....	189	Ergotin in Uterine Fibroids...	471

- Electricity, Medical 520
 Ext. Picus Porteana..... 529
- Flexions a Cause of Uterine
 Disease..... 47
 Fibroma, Ergot in Uterine ... 88
 Fever, Treatment of..... 172
 Fatal Case..... 258
 Fillet as an Obstetrical Aid ... 414
 Feminine Character, Develop-
 ment of..... 518
 Filth without Fever..... 524
 Fecal Fluid in Stomach..... 563
- Goitre, Prof. Gross' Treatment. 44
 Glottis, Spasm of..... 45
 Galvanism, Therapeutical use of 454
 Gums, When to Lance..... 465
- Hæmatozoon in Human Blood.. 39
 Hydatids, Uterine..... 53
 Headache, Sick..... 71, 188
 Hair Dyes, Detecting Poison in 76
 Hypodermic Injections of Ergot 88
 Hæmoptysis..... 149
 Headache, Ergot in ... 187
 Hernia, Aspiration in..... 191
 Hectic Fever.... 245
 Hair, Change of Color in..... 382
 Hereditary Influence in Stock. 394
 Homeopathy, Scientific..... 405
 Hæmoptysis, Ergotin in..... 471
 Hip-Joint, Excision of..... 476
 Harding Murder Case..... 492
 Holland, Sir Henry, Decease of. 532
- Invagination of Bowel..... 57
 Iodine as a Disinfectant 191
 Inoculation..... 286
 Inœa..... 427
 Innocents, Slaughtering of.... 435
 Iris, Rupture of..... 476
 Irido Choriditis..... 561
 Inflammation of Ankle-Joint.. 562
- Jejunum, Rupture of..... 189
- Kidney, Contracted Granular
 174, 217
 Kidney, Extirpation of..... 523
- Liver, Fatty, in Lactation.... 189
 Lumbrici in Abscesses..... 191
 Liebig, Baron..... 244
 Labor, Painless 260
 Labor, Position in..... 353
- Mound Builders..... 35
 Myrrh, Value of..... 41
- Menorrhagia, Oxide Silver in.. 44
 Murder, Safeguards against.... 51
 Microscopic Objectives, Tests of 79
 Mercury, Action on the Liver.. 82
 Microscopic Examination of
 Urine..... 135
 Mycogenes in Higher Role., 139
 Migraine..... 228
 Microscopic Objectives of Gund-
 lach..... 291
 Medical College in O., troubles in 386
 Mule, Fecundity of..... 387
 Methylene Ether, Death from. 428
 Mumps, Nature of..... 428
 Myopia and its Operative Cure. 475
 Menstruation, Precocious..... 476
 Mental Phenomena, Modern
 Study of 482
 Malignant Growths..... 497
 Microscopic Objective of Schiek 530
 Microscopical Examination of
 Blood of Cholera Patients ... 531
 Mortuary Report of Cincinnati. 570
- Notes from Practice..... 34
 Night Sweats in Phthisis 425
 Natural History..... 530
- Odontalgia, Chloral in..... 44
 Ozokerit in Skin Diseases..... 45
 Organisms in Small Pox..... 91
 Opium Habit, Collins' Remedy. 235
- Pertussis, Nitric Acid in..... 43
 Peritonitis, Ox. potash in..... 45
 Procidentia Uteri..... 59
 Prolapsus Uteri, Tannin in... 89
 Prolapse of Womb, Med. Treat-
 ment of..... 93
 Psychology of Vice and Crime. 101
 Paupers. Med. Attendance upon 141
 Puerperal Fever, new treat-
 ment..... 179, 190
 Pandemic Wave..... 186
 Potassium, Bromide..... 221
 Perineum, Rupture of..... 261
 Population, True Law of 269
 Phosphorous Poisoning, Test of 284
 Pepsine in Diarrhea of Infants. 359
 Paraplegia, Alcoholic..... 369
 Plastic Surgery..... 378
 Pertussis, Pathology and Treat-
 ment..... 383
 Pregnancy, Extra-Uterine.... 417
 Pulmonary Tuberculosis, Pre-
 tubercular..... 437
 Pinus Canadensis..... 452
 Phosphates, Methods of Using. 475

Pins, Passage of per Anum....	476	Thermometer, Clinical.....	61
Pepsine, Method of Testing....	531	Tannin in Prolapsus Uteri....	89
Renal Inadequacy.....	66	Tonsillitis, Sulphites in.....	140
Royal Ophthalmic Hospital ..	187	Toe-nail, Ingrowing.....	189
Rheumatism, Blisters in.....	221	Tympanic Membrane, Rupture.	427
Radial Nerve, Paralysis of....	428	Twins, Position of.....	429
Resuscitation, Case of.....	470	Typhoid Fever, Etiology of....	447
Rupture, Radical Cure of.....	510	Tibia, Fracture of.....	464
		Typhoid Fever from Infected Milk.....	475
Spermatorrhea in Women.....	42	Tetanus.....	522
Small Pox, Warm Bath in.....	44	Tobacco, Consumption of.....	523
Spermatozoa, How Enter Uterus.....	85, 192	Tobacco, Its Uses and Abuses .	548
Surgery, Ancient in Scotland..	90	Thompson, Sir Henry.....	569
Sensory Nerve Action.....	118	Tribute to the Doctors.....	569
Social Evil.....	122	Urine, Microscopic Examina- tion of.....	135
Sterility, Cause and Treatment.	133	Urine, Incontinence in Children	137
Sexual Organs, Obesity in....	138	Urethra, Stricture of.....	182
Scarlet Fever, Treatment of....	138	Unpleasantness, Professional..	290
Salicin in Diarrhea.....	190	Uterus, Bicarnis.....	415
Scars, Prevention in Small Pox	190	Vice and Crime, Psychology of.	101
Salivation from Ether.....	191	Vaccinal Syphilis.....	232
Snake Bite, Ammonia in.....	285	Vomiting in Pregnancy....	234
Stramonium, Poison by.....	286	Variola & Vaccine Inoculation.	286
Syphilis, Placental.....	381	Vital Statistics.....	539
Sclerosis, Cerebral.....	423	Women, Position of.....	167
Strychnia in Nervous Affections	424	Women in Hospitals.....	387
Skull, Compound Depressed Fracture of.....	425	Whooping-Cough as a Cause of Spinal Caries.....	485
Skin Diseases, Classification of.	430	Xylol in Small Pox.....	45
School Poisoning.....	466	Yellow Fever.....	527
Strabismus, Operation for....	474		
Specialties.....	483		
Sleeping Rooms.....	513		
Spindle-Cell, Sarcoma of Iris..	562		



This Book is due on the last date stamped below. No further preliminary notice will be sent. Requests for renewals must be made on or before the date of expiration.

DUE

Ap 11 '34

RETURNED

Ap 10 '34

A fine of twenty-five cents will be charged for each week or fraction of a week the book is retained without the Library's authorization.

